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The RHODE ISLAND MEDICAL JOURNAL

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Volume XLIV, No. 10 October, 1961

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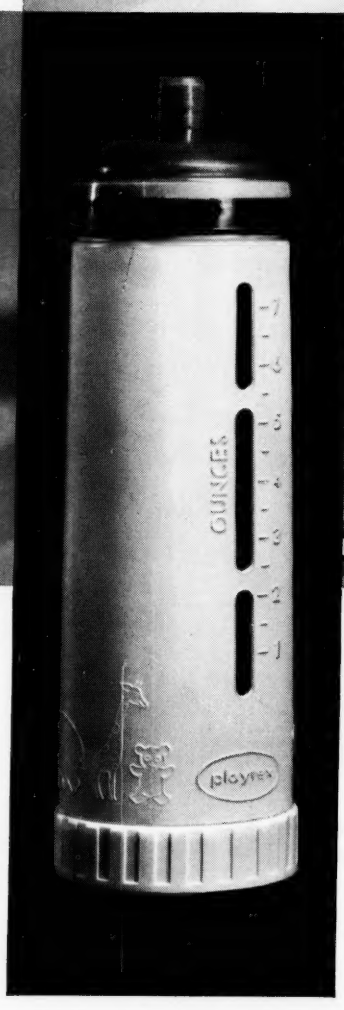
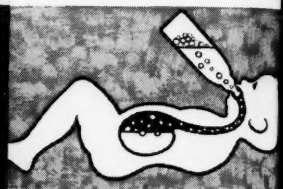
The revolutionary discovery that simulates breast feeding....

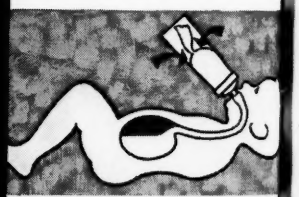
Natural nursing action nipple *induces even sucking that dramatically lessens outside air swallowing and makes baby exercise his jaws. Designed to avert tongue-thrusting and other malocclusions not inhibited by conventional nipples.*

Because the disposable bottle is pre-sterilized, it *eliminates the possibility of contamination through improperly sterilized bottles.*





With conventional bottle *air has t get inside bottle for milk to com out. Nipple often collapses and bab has to suck harder, so more air get into his stomach. Both overfeedin and underfeeding can ensue, alon with the aerophagia and flatulenc which can produce colic, spitting up, and after feeding distress.*



Natural design nipple *of Playte Nurser assures even flow. Its pliabl* ***inner bottle*** *contracts with atmo spheric pressure as formula is con sumed. Baby takes more nourishin formula, less swallowed air to caus discomforting spitting up and colic*

an added measure of protection for little patients

against relapse
against "problem" pathogens

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syrup

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THE WASHINGTON SCENE

A Summary Prepared by the Washington Office of the American Medical Association

THE SENATE AND HOUSE approved a multi-million-dollar expansion of federal aid to community health services.

The Senate approved it by routine voice vote a few weeks before adjournment. The House earlier had approved a slightly different form of the legislation. No difficulty was anticipated in adjusting the differences of the two versions so that it could become effective at an early date.

Some of the programs covered by the legislation were of special importance to the aged and the chronically ill. Key provisions of the bill would:

— Raise from 30 to 50 million dollars, for five years the annual authorization for matching grants to states and cities for public health services such as home nursing, home health care and a variety of services to nursing homes.

— Establish a five-year 10 million-dollar-a-year program of special grants to nonprofit groups for research and development aimed at improved health services given outside the hospital.

— Raise from 10 million to 20 million dollars the annual authorization for construction of public and nonprofit nursing homes.

— Extend loan provisions for hospital construction under the Hill-Burton Act until its grant program expires in June 1964.

— Raise from 1.2 million to 10 million dollars the annual ceiling on grants for hospital research and permit grants for experimental or demonstration hospital units.

— Extend for three years the matching grant program which provides federal help for construction of health research facilities and authorize 50 million dollars rather than 30 million dollars a year.

Influenza Epidemic Predicted

Doctor Luther L. Terry, Surgeon General of the U.S. Public Health Service, predicted that there will be a new influenza epidemic in the United States this fall and winter.

He urged immediate vaccinations for people over 65, pregnant women and persons with heart diseases and other chronic illnesses.

"We are probably due for some Asian flu outbreaks, since they come in two- or three-year cycles," Terry said, "and we are overdue for type B flu outbreaks which come in four- to six-year cycles."

More than 86,000 people in the three most susceptible groups died from influenza between September 1957 and March 1960. Asian flu has been dormant in this country since then. It has been more than six years since type B flu has been widespread.

Both types of flu were prevalent in other countries in 1960-61, especially in England. In 1951, when England had a similar epidemic, flu reached this country the following year, Terry noted.

The U.S. Public Health Service is alerting physicians, state health officers and welfare agencies to include flu shots in their programs of public assistance.

Live Virus Polio Vaccine Licensed

The Type I oral, live virus polio vaccine developed by Doctor Albert Sabin has been licensed by the U.S. Public Health Service for marketing in the United States.

However, the PHS, the American Medical Association and others urged that the widest possible use still be made of the Salk killed vaccine. The principal use of the newly licensed oral vaccine this year will be against epidemic threats of Type I polio.

The license for manufacture of the oral vaccine was granted to Pfizer, Ltd., Sandwich, England, and it is being marketed in this country by Chas. Pfizer & Co., Inc., of New York.

Doctor Luther L. Terry, surgeon general of the PHS, said he expected Type II oral vaccine to be licensed soon but that it would be several months before Type III would be licensed.

Pfizer is expected to have more than 50 million doses of the Type I oral vaccine available for use by next spring at the start of the 1962 polio season. For an epidemic reserve, the PHS ordered at the time of the licensing a total of 900,000 doses of the Type I vaccine in frozen form at a cost of $81,000.

Information on the terms for obtaining vaccine from this epidemic reserve was sent to state and territorial health officers. The requirements include:

At least three cases of Type I polio in the community within a month, of which two have been confirmed to be Type I by laboratory analysis.

Adequate community organization and medical leadership to insure rapid and complete coverage of the population under 50.

Agreement to make the vaccine available without charge to persons under 50.

All local requests must be channeled through state health departments.

Of the three types of polio virus, Type I has been responsible in recent years for between 60 and 70 per cent of all paralytic polio in this country, PHS said. However, a sampling of virus isolated from paralytic cases this year suggests that Type III may be increasing in relative importance as a cause of paralytic disease.

Doctor Terry attributed "the progressive decline in polio since 1955" to the Salk vaccine. He said that through Aug. 5 only 234 paralytic cases had been reported this year, as compared "with 13,850 for the polio season of 1955, the first year in which the Salk vaccine became available in limited quantities."

The A.M.A. said the licensing of the live virus vaccine marked "another step forward" in the fight against polio. The Association predicted the new vaccine would be "a valuable weapon against epidemics of Type I polio." However, the A.M.A. again urged that everyone complete a series of Salk shots.

"Until such time as oral vaccines against all three types are available, the Salk vaccine remains the only protection available against all types of paralytic polio," the A.M.A. said.

Legislative Roundup

Community Health Bill . . . Conferees reached agreement September 18 on the Community Health Services and Facilities Act (H.R. 4998) which steps up federal grants to help meet the medical costs of the aged and chronically ill. . . . The House adopted the conference report on September 20, thus clearing it for the President's signature. . . . The compromise measure authorized approximately 420 million dollars in outlays over the next five years. . . . The bill only authorizes expenditures. . . . Actual cash must be put up in a separate appropriations bill. . . .Main provisions of the bill include the following: (a) increases from 30 to 50 million dollars for a five-year period the authorization for grants to states for public health services; (b) provides 10 million dollars for five years beginning in July, 1962, for grants to make studies for improving methods of providing health services for the aged outside hospitals; (c) increases the authorization for appropriations for nonprofit nursing homes under the Hill-Burton program from 10 to 20 million dollars; (d) broadens the surgeon general's authority to conduct research in the development and utilization of hospitals and other medical facilities, boosting grants for this purpose from 1.2 million to 10 million dollars; (e) increases the matching grant program for construction and equipping of health research facilities from 30 to 50 million dollars for the current fiscal year; (f) increases the grants for the construction of health facilities to two thirds of the cost or even larger if there are unusual circumstances; and (g) extends the Hill-Burton loan program until July 1, 1964, the date the Hill-Burton grant program expires.

Rautrax-N lowers high blood pressure gently, gradually . . . protects against sharp fluctuations in the normal pressure swing.

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Supply: Rautrax-N – capsule-shaped tablets providing 50 mg. Raudixin, 4 mg. Naturetin and 400 mg. potassium chloride. *Rautrax-N Modified* – capsule-shaped tablets providing 50 mg. Raudixin, 2 mg. Naturetin and 400 mg. potassium chloride.

Rautrax-N*

Squibb Standardized Whole Root Rauwolfia Serpentina (Raudixin) and Bendroflumethiazide (*Naturetin) with Potassium Chloride

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IN THE EDITOR'S MAILBOX

AMERICAN MEDICAL ASSOCIATION
Chicago 10, Illinois

To the Editor:

During the Annual Meeting this year, the A.M.A. House of Delegates approved a plan to co-operate in the recruitment of volunteer physicians for emergency service in the foreign mission field.

The Department of International Health is seeking the names of physicians who will volunteer to serve in the mission field on a temporary basis. We are receiving the co-operation of agencies representing every religious denomination in the U.S. which sponsors medical missionaries.

Each physician who volunteers will be asked to complete an application form. This information will be used by the missionary agencies in considering the qualifications of the applicant. The final choice as to the acceptability of each volunteer physician rests with the screening committees of the missionary agency.

We shall appreciate your co-operation in informing the members of your society about this new A.M.A. program. Physicians who are interested should write directly to the Department of International Health. Attached is a proposed article which we are submitting to you for publication in your journal. (See below)

If we can provide any additional information, please do not hesitate to let us know.

Sincerely yours,
F. J. L. BLASINGAME, M.D.
Executive Vice President

Doctor Diplomats

Five physicians from Tulsa, Oklahoma, members of the First Presbyterian Church of Tulsa, are giving up their practices for six-week periods to serve voluntarily at the Miraj Medical Center in Maraj, India.

Doctor C. S. Lewis, one of these five Tulsa physicians, recently reported to the A.M.A. on the progress of the project labeled *Doctors in Asia.*

The first of the group of volunteer physicians flew to Miraj in mid-August. He will return at the end of September and the next doctor will make the trip. In all, the five physicians will donate a total of thirty weeks to the program. The project is endorsed by the Tulsa County Medical Society. Funds for medical equipment, transportation and other expenses were raised through church and public contributions.

Other groups of American physicians are also becoming interested in the possibility of initiating a similar venture in their own communities. For example, several doctors met with Doctor Lewis during his A.M.A. visit to discuss the feasibility of adopting an overseas program which would provide medical care to another area of the world equally in need of such assistance.

Still another example of American physicians demonstrating their interest and willingness to serve in foreign mission fields on a temporary basis is shown by the large number of doctors who have written to the A.M.A. Department of International Health in the last few months to inquire about such service. This new Department administers a program approved last June by the A.M.A. House of Delegates whereby members of the A.M.A. may volunteer for service in the foreign mission fields on a temporary basis when emergencies arise. Co-operating with A.M.A. in this program are missionary agencies representing every denomination sponsoring American medical missionaries.

Physicians interested in volunteering for such service are asked to write directly to the A.M.A. Department of International Health, 535 N. Dearborn Street, Chicago 10, Illinois.

PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1411 K Street, N.W., Washington 5, D.C.
September 18, 1961

To the Editor:

The Problem of Comparative Efficacy, an excellent analysis of one of the most objectionable aspects of the Kefauver-Celler bill, which you published in August, provided a valuable and timely service to your many readers.

Physicians everywhere should be alerted to the fall-out of this bill, if enacted, on the entire medical profession and should realize it would have a far reaching effect on all practitioners. The harassment of the pharmaceutical industry by reduced patent protection, government-named products and continual plant inspections is of secondary importance. The physician's right to prescribe the drugs he needs in the manner he prefers is part of the freedom of American medicine, and must be preserved.

Sincerely,
ROBERT J. BENFORD, M.D.
Director of Medical Relations

CONFERENCE ON PREVENTION OF DISABILITY

Auditorium, George Building, Rhode Island Hospital

Wednesday, November 29 and Thursday, November 30, 1961

The Conference is Open to All Rhode Island Physicians

WEDNESDAY, NOVEMBER 29, 1961

9:00-9:30 A.M.	REGISTRATION
9:30 A.M.	GREETINGS, OLIVER G. PRATT, *Director,* Rhode Island Hospital
	OBJECTIVES AND PLAN OF CONFERENCE, THOMAS PERRY, JR., M.D., *Chairman,* Chronic Illness Committee, R. I. Council of Community Services, Inc.
9:45 A.M.	THE CHALLENGE OF DISABILITY, BERNARD D. DAITZ, PH.D., *Consultant,* Restorative Services, Chronic Disease Program, Public Health Service
10:15 A.M.	THE ROLE OF THE PHYSICIAN IN THE PREVENTION OF DISABILITY, LUTHER TERRY, M.D., *Surgeon General,* Public Health Service
10:45 A.M.	COFFEE BREAK
11:15 A.M.	PRINCIPAL DISEASE ENTITIES THAT CAN RESULT IN DISABILITY, JOSEPH DWINELLE, M.D., *Director,* Physical Medicine, Rhode Island Hospital
11:45-12:45 P.M.	MUSCULOSKELETAL SYSTEM,* O. D. CINQUEGRANA, M.D., *Moderator;* SEEBERT J. GOLDOWSKY, M.D.; KENNETH G. BURTON, M.D., AND HENRY M. TYSZKOWSKI, M.D.
1:00 P.M.	LUNCHEON
2:15-3:15 P.M.	NERVOUS SYSTEM,* HERMAN KABAT, M.D., *Moderator;* DAVID J. FISH, M.D.; ABRAHAM SALTZMAN, M.D., AND NATHAN CHASET, M.D.
3:15-3:45 P.M.	COFFEE BREAK
3:45-4:45 P.M.	CARDIOVASCULAR SYSTEM,* HENRY MILLER, M.D., *Moderator;* FRANK B. CUTTS, M.D.; SEEBERT J. GOLDOWSKY, M.D., AND K. W. HENNESSEY, M.D.
4:45-5:00 P.M.	SUMMARY, JOSEPH DWINELLE, M.D.
5:45 P.M.	SOCIAL HOUR (Dutch treat), Johnson's Hummocks
6:30 P.M.	DINNER
	REHABILITATION OF THE DISABLED, FRANK H. KRUSEN, M.D., *President,* Sister Elizabeth Kenny Foundation, Minneapolis, Minnesota
	THE IMPORTANCE OF PREVENTION OF DISABILITY, CONGRESSMAN JOHN E. FOGARTY

THURSDAY, NOVEMBER 30, 1961

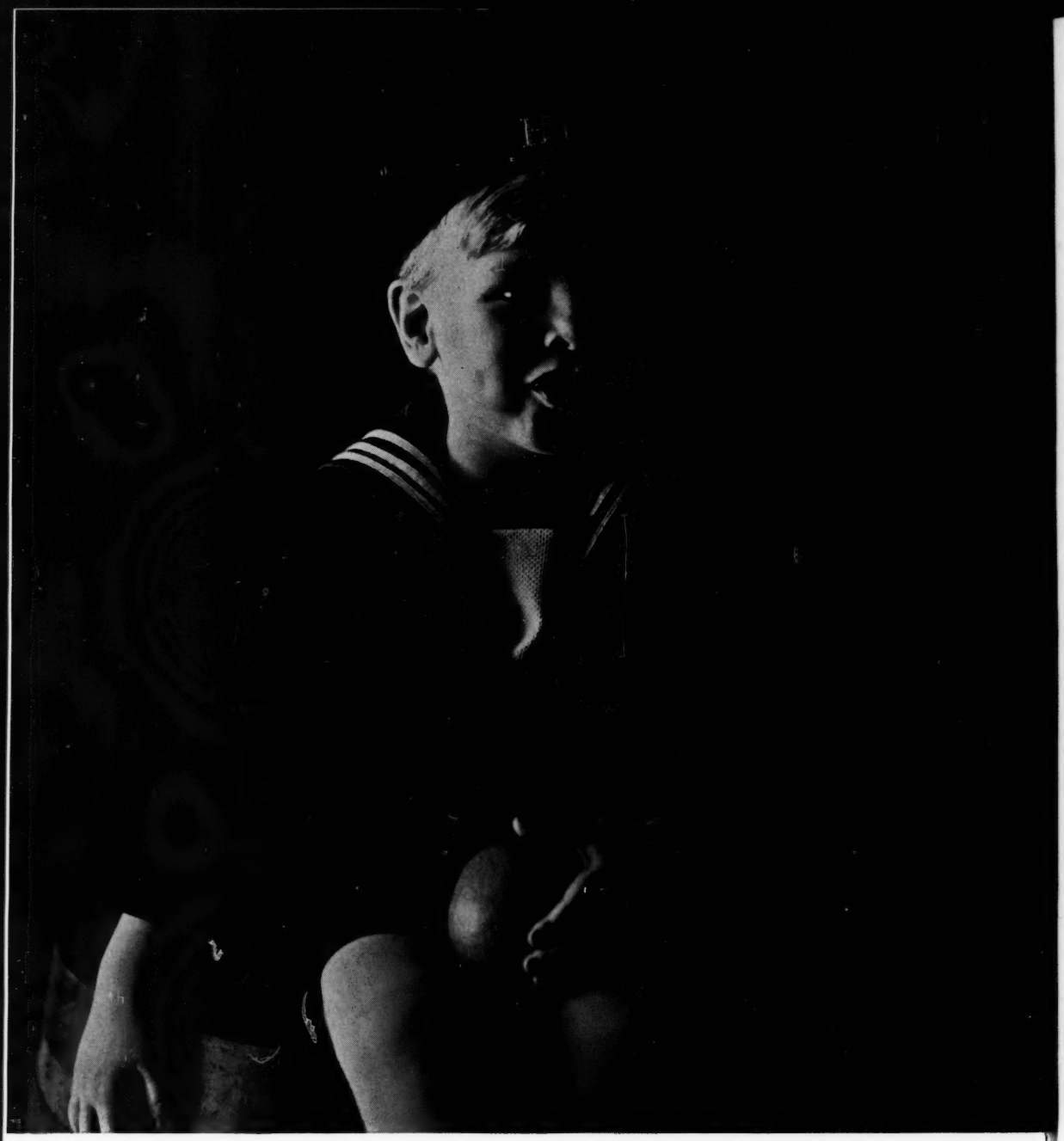
9:30-10:00 A.M.	SUMMARY OF PREVIOUS DAY'S DISCUSSIONS, LESLIE KNOTT, M.D., *Director,* Chronic Disease Program, Public Health Service
10:00-12:45 A.M.	GROUP DISCUSSIONS of 10 or 12 people, with a moderator and one or more resource people in each group
11:00-11:30 A.M.	COFFEE BREAK

Subjects to be Discussed by All Groups

1. How can the general practitioner be involved as a key person in the prevention of disability?
2. How can leadership be provided in each state to make prevention of disability possible through the various resources?
3. How can community resources be involved and identified? How can physicians be helped to find resources in their local communities?
4. What is the role of official and voluntary health agencies?
5. Is paying for such services a problem? If so, what recourse do we have to such agencies as Blue Cross and Blue Shield?

1:00 P.M.	LUNCHEON
2:00-3:00 P.M.	GROUP REPORTS
3:00-3:30 P.M.	CONFERENCE SUMMARY, JOSEPH E. CANNON, M.D., M.P.H., *Director,* Rhode Island State Department of Health

*In each of the three systems being considered, two or three cases will be presented, taking ten minutes each, followed by a reaction panel consisting of a physiatrist, a general practitioner, and a specialist in the particular system.



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...or, to be exact, a total of 2,106 ounces in his first two years. And how much he'll need during his first twenty years would have to be measured by the truckload, because the need for the nutrients contained in Florida orange juice continues throughout life.

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For a way that combines real nutrition with real pleasure, there's nothing better than the oranges and grapefruit ripened under Florida's own sunshine. Somehow, nothing can surpass the result of the combination of sun, air, temperature, and soil found in Florida.

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When you suggest to your patients that they have a big glass of orange juice for breakfast, or for a snack, or when they want to raid the refrigerator, the deliciousness of Florida orange juice will give you assurance that they'll *want* to carry out your recommendation. You'll be helping them to the finest drink there is—by the glassful or the barrel.

The RHODE ISLAND MEDICAL JOURNAL

VOL. XLIV OCTOBER, 1961 NO. 10

A SURGEON LOOKS AT CANCER*

JULIAN JOHNSON, M.D.

The Author. *Julian Johnson, M.D., Professor of Surgery, School of Medicine, the University of Pennsylvania, Philadelphia, Pennsylvania.*

As we as surgeons grow older it is perhaps natural that we stop and ask ourselves where we stand on the problem of cancer. The optimistic surgeon is apt to think of the patients in whom he has obtained a "cure" as a result of his extirpation of the tumor. The pessimistic surgeon is apt to think of the failures where he has done what he felt to be a good operation and yet the patient has gone on to die of widespread malignancy. The optimistic surgeon may say — look at the patient with cancer of the left colon; if he will come to me before it has spread into the lymph nodes, I can get a 75 per cent cure or better. He says — look at the patient with cancer of the stomach; if he will come to me when the cancer is confined to the stomach, I can get a 50 per cent cure or better. He says — look at the patient with cancer of the lung; if he will come to me when his tumor is no more than one or two centimeters in diameter, I can get a 75 per cent cure. The thoughtful surgeon must admit, however, that once the cancer has spread beyond the organ in which it originated, it may be extraordinarily difficult or impossible to remove it completely.

The advances made in the surgical technics, as well as in the improved knowledge in pathology and physiology, in the last 100 years have spurred the surgeon on to Herculean efforts to remove malignant tumors. The discovery of the principle of aseptic technic, the introduction of anesthesia and the pain relieving drugs, the understanding of the basis of surgical shock and the existence today of the modern blood bank — these and many other developments have made it possible for the surgeon to remove major portions of a patient's viscera in an effort to remove a malignant tumor. It is now possible to remove a lung, most of the esophagus, the entire stomach, all of the large bowel, and large parts of the small bowel. It is common practice to remove a kidney and, not infrequently, the bladder. One or more lobes of the liver may be removed for primary or metastatic disease. A radical neck dissection, often bilateral, or a radical groin dissection is being done prophylactically. And, indeed, in some extensive tumors subtotal evisceration is being carried out. It cannot be denied that an occasional patient's life is prolonged by these massive surgical feats, but the thoughtful surgeon knows that the problem of cancer will never be solved in this fashion since, by and large, if the patient is to be cured of his disease, he must present himself to the surgeon before the tumor has spread beyond the viscera in which it arose.

Let us consider cancer of the breast. Radical mastectomy, the present standard operation for cancer of the breast, was introduced by Halsted at about the turn of the century and has changed very little in the last sixty years. It has been recognized that when the mass is situated in the medial part of the breast close to the midline the lymphatic spread is apt to be to the mediastinal nodes rather than to the axilla, so that the removal of these nodes has been advocated by some. A few years ago Wangensteen advocated section of the clavicle and radical neck dissection along with a radical mastectomy and axillary dissection — an operation referred to as "super-radical mastectomy." We have heard no more about this operation in recent years, so that I can only assume that it did not materially improve the end result. Haagensen, on the other hand, has gone to the other extreme and will perform a radical mastectomy only when the most rigid criteria have been met.

Recently, McWirter and his group in Edinburgh have contended that simple mastectomy, plus X-ray therapy, gives end results superior to those obtained by radical mastectomy. Unfortunately, the protocol set up in Edinburgh was not sufficiently strict to be conclusive. The fact is that as of now we cannot say conclusively that radical mastectomy is or is not superior to simple mastectomy plus X-ray therapy. The data do not allow a clear-cut

continued on next page

*An address delivered at the annual meeting of the Providence Surgical Society, at Providence, Rhode Island, April 13, 1961.

conclusion. McWirter's group compared five years of simple mastectomy and X-ray therapy with a previous five-year period of radical mastectomy and found the results superior. However, the results of radical mastectomy have improved for each five-year period in most hospitals. The patients are presenting themselves to the surgeon earlier as time goes on.

Let us consider cancer of the stomach. It was among the first of the visceral malignancies radically attacked by the surgeon. The technic described by Billroth has been changed very little since his day. It is true that extension of the confines of resection have been suggested. Lahey, at one time, raised the question as to whether total gastrectomy should not be done for all cancers of the stomach. Pack and McNeer have suggested the "extended resection," including the omentum and spleen. Their published reports showed a five-year survival rate superior to those which had previously been reported at that time. Shortly thereafter, however, some of the members of our group at the University of Pennsylvania looked up the results of gastric resection for cancer of the stomach in our hospital, and found that the five-year survival rate was slightly greater than that reported from the Memorial Hospital group. Doctor McNeer, who happens to have been a classmate of mine, met me one day in San Francisco and said, "You fellows at the University must really be radical in your gastric resections." As a matter of fact, the reverse is true. Our gastric resections have been conservative by and large, and certainly the patients operated upon at the University Hospital previous to five years ago did not have any more radical resection and probably much less radical than that described by the Memorial group. The question naturally arose as to why our five-year results were so good. I am inclined to think that this could be accounted for, at least in part, by the fact that we had taken a very aggressive viewpoint regarding gastric ulcer. It is probable that we may have had a larger percentage of patients with ulcer of the stomach with small areas of malignancy present than would be found in most series. Since the five-year survival rate would be high in such a group, that may have had a considerable influence upon the over-all results in our series. It is certainly true that it is theoretically possible that the extended type of gastric resection might in an occasional patient pick up that last lymph node that is involved with the disease. Our series, however, indicated that when the tumor was confined to the stomach and no lymph nodes were involved, the five-year survival rate was 54 per cent. Whereas if lymph nodes were involved, the five-year survival rate dropped to 22 per cent. If a high percentage of the patients are to be cured by the surgeon, the patient must present himself to the surgeon at a time when the tumor is still confined to the stomach. The data from the Surgical Service of the University Hospital, however, indicates that whereas 54 per cent five-year survival can be obtained in the patient in whom the tumor is confined to the stomach, nevertheless this represents only 16 per cent of the patients admitted to the Surgical Service. There certainly are a few additional patients who are admitted to the Medical Service or other services who never came to operation, so that the over-all five-year survival rate among the patients who were admitted to the hospital as a whole would be somewhat less than that figure.

Let us consider carcinoma of the lung. This is a cancer which appears to be on the increase, as opposed to cancer of the stomach which appears to be on the decrease in this country. There certainly appears to be ample evidence that the increase in cancer of the lung is related to the increase in the consumption of cigarettes in this country. The thoracic surgeon has repeatedly asked himself how the results in the treatment of cancer of the lung might be improved. The layman has obviously been interested in what the medical profession has to offer in this disease, as well as in other malignancies, and the fact remains that in our hospital when a patient with cancer of the lung walks in the front door, he has only a 9 per cent chance of being alive five years later. As far as I know, there are no reported data with a better five-year survival rate of the over-all unselected group of patients with cancer of the lung. The surgeon, in his endeavor to improve the salvage of this disease, has done pretty much the same as in other areas of malignancy. He has felt that he ought to try to extend the confines of the operation to get around the malignancy. I have been particularly interested in this field. It is not uncommon at the present time for the thoracic surgeon, in trying to deal with cancer of the lung, to remove not only the entire lung but also a portion of the chest wall, if the tumor happens to be kissed up against the chest wall, a portion of the diaphragm, the pericardium, a portion of an atrium perhaps, or other important structures. I must confess that my own personal experience has been that when I have extended my operation in this fashion, I have seldom benefited the patient by so doing. However, at the Thoracic Surgical meeting in Denver in 1950, Philip Allison, then of Leeds, applied the term "radical pneumonectomy" in the treatment of cancer of the lung in pretty much the same manner that we apply the term "radical mastectomy." His concept was that even though the tumor of the lung be small, a radical pneumonectomy should be carried out with the design to remove as large a spread of lymph node bearing area in the mediastinum as possible along with the lung. There was great appeal to this idea, for cer-

tainly if radical mastectomy be worthwhile in cancer of the breast, it would appear that radical pneumonectomy would be worthwhile in cancer of the lung. Unfortunately, no data are available as yet which indicate that the five-year survival figures are higher than with the standard type resection. This has been rather disappointing to me, as to most other surgeons, I am sure, because any surgeon likes to feel that he can help the patient more by being a little more aggressive. To date this has not been shown to be true in cancer of the lung. In our series we have found that we were able to carry out a resection in only a little over a third of the total group admitted to the hospital. Of the ones who were subjected to resection, there was five-year survival in 26.7 per cent but this constituted only 9 per cent of the total group admitted to the hospital. The best figures presently obtainable are those by Hughes at the Veterans Administration Hospital in Memphis, Tennessee, where 37 per cent five-year survival rate of all patients resected is reported. I happened to work with Doctor Hughes during the last few months of the war and know him to be a conservative surgeon. His resection rate was only 22 per cent of the total, whereas most of the rest of us had a resection rate of 35 per cent or more of the total. It is interesting to note, however, that in his end results, the percentage of five-year survivals among the total number of patients was 9 per cent, the same as ours. It would appear that Doctor Hughes in his conservatism has avoided operation on a good many patients who were not curative prospects but, at the same time, has carried out a resection on all the patients who were amenable to five-year survival.

Let us consider the problem of cancer of the esophagus. This is generally recognized by all surgeons in this field as being a rather miserable cancer to deal with. Many times in the past I have operated upon a patient with cancer of the esophagus and cut across the esophagus at what seemed to me to be a very good distance from the palpable tumor, only to find that the microscopists found malignant cells at the line of resection. I am sure it is also a frequent experience for thoracic surgeons, when operating upon a patient perhaps with cancer of the mid-portion of the esophagus, to open the abdomen and find metastatic disease around the celiac axis. This has led many surgeons to feel that in order to remove a cancer of the esophagus completely, a subtotal esophagectomy should be carried out in most, if not all, cases and as much of the lymphatic bearing area as possible surrounding the esophagus should be removed also. In 1955 when some of you present here were visiting with me in the British Isles, we saw Mr. Andrew Logan in Edinburgh do an extended type resection for cancer of the lower esophagus. It was the first time that I had seen a real bloc dissection done for cancer of the lower esophagus. He started out on the left side of the chest, as if he were taking out the aorta. He freed the mediastinum from the surrounding structures, from the aorta posteriorly and from the heart anteriorly, and removed the entire mediastinum from about the level of the bifurcation of the trachea downward, including the spleen, the tail of the pancreas, and the upper half of the stomach, skeletonizing the celiac axis, dividing the splenic and left gastric arteries, and leaving only the hepatic artery. I did not see the tumor until after the specimen was removed. I have not heard the five-year results of this effort but I have talked to Mr. Bruce of Edinburgh who said that the effort has been continued. I happened to talk to one of the associates of Mr. Logan a year or so ago. He told me that although the mortality for the operative procedure was about a third of the patients involved, yet half of the patients who survived the operation were alive at three years. This adds up to 1/3 three-year survival. What will turn up in five years of course we do not know, but it seemed fairly unlikely that the figures are going to be really superior to those recently reported from the Mayo Clinic in which there was 25 per cent five-year survival of those patients subjected to the standard type resection.

In reviewing this data it seems likely that the ultimate answer to cancer is not a more radical operation. We operate upon cancer only because we have no better form of treatment. To find a small tumor a centimeter in size in the lung or the stomach or the esophagus and to feel that the sacrifice of that entire organ is the only method of cure seems ridiculous. There is no one more aware of this than the surgeon. Likewise, there is no one more aware than the surgeon of how infrequently he can get a patient to operation at a time when cure is almost a certainty. For that reason it would seem to me that there is no one who should be more interested than the surgeon in trying to find some other cure for cancer. The results obtained in malignancy which I have briefly reviewed certainly suggest that the efforts to extend the surgery beyond the standard or commonly accepted types of resection have so far improved the end results little if any.

I fear that I may have been speaking of cancer as if it were one disease. No one is more aware than the surgeon that a cancer may behave in strange and mysterious ways. One cancer may grow so slowly as to cast real doubt upon whether it is a malignancy, while another spreads like wildfire. Even cancers of the same organ which exhibit only minor differences under the microscope may behave quite differently clinically. My old chief removed a lymph node from the mesentery of a patient and obtained a diagnosis of sarcoma. Twenty-five years

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later I removed a lymph node from the same patient's neck which looked identical microscopically to the one removed twenty-five years previously. Why had it been quiescent for twenty-five years?

Some years ago a patient with cancer of the breast was followed at the Philadelphia General Hospital, refusing either operation or X-ray therapy. She contained the tumor in her breast for almost fifteen years before it spread and led to her death.

Every surgeon has had some such experience. I have a patient under my care at present who had a radical mastectomy nineteen years ago. Twelve years later, or seven years ago, I removed a metastatic lesion six centimeters in diameter from her back. Another similar one on her sternum was treated with radium needles in sutures placed back and forth in this mass because I thought it was foolish to remove it surgically. Now seven years later, and nineteen years since her radical mastectomy, she has half a dozen small cutaneous nodules which are growing very slowly. What enzyme or antibody does this woman have which has held her cancer in check for nineteen years? If we could answer that question, it seems very probable that we might be well on our way toward the solution of the cancer problem. We are in the unfortunate position of not knowing the etiology of cancer. As far as I am aware, there is no pathologist who could look at a single cancer cell and say that it is a cancer cell and that it will behave differently toward its host than any other cell in the body. What it is that makes the cancer grow like wildfire in some instances and very slowly in others also is not known. So that a great deal of time and money has been spent and is being spent on the basic problem of the etiology of cancer. There are those who feel that eventually all human as well as animal cancer would be proved to be due to viruses. A great deal of scientific evidence at the present time points in this direction, and it may very well prove to be the case. If that should prove to be correct, we would be left with the problem of finding a chemotherapeutic or other agent which would be effective against the virus. To believe that this will not be accomplished is almost unthinkable. How long it will take to find such an agent, of course is not known but certainly such an agent will be found. No one is more interested in solving this than the surgeon who daily comes in contact with malignant disease.

At the present time a great effort is being carried on to try to find a chemotherapeutic agent which may have some effect upon the retardation of the growth of cancer. To date the results have been encouraging. The results have been encouraging in one respect particularly, and that is the fact that it has been possible to find that independent investigators in a large group of university hospitals are willing to subject themselves to the protocol of a careful scientific investigation to determine the usefulness of a specific drug. There are those who say that it is foolish to embark on such a program without knowing the cause of cancer. I would like to point out that many of the great discoveries in medicine have come about in this way. It is reasonable, therefore, it seems to me, to try out agents which give some promise in the control of cancer. By means of a large group of patients being subjected to a rigid protocol on a double-blind study, so that even the surgeon doesn't know which patient is getting the drug and which one isn't, it is possible within a relatively short period of time to evaluate the use of any particular form of therapy. This has been the greatest gain in the chemotherapy program to date. If it is possible to hold this group of investigators together in any one field of cancer, if an agent does come along which is claimed to have real virtue it will be possible in a very short period of time, a matter or two or three years, to say unequivocally whether a certain program is beneficial in the treatment of a specific cancer. Of the drugs which have been tried to date in the lung, stomach, and colon, none has been shown to be of real benefit. In the breast program, however, the use of Thiotepa in conjunction with radical mastectomy appears to give better results. Although it is obviously not a cure for cancer, the data, contrary to all of the other programs, indicates that the chances of recurrence within a two-year period after radical mastectomy has been materially decreased by the use of Thiotepa as it is now administered. Whether this particular agent and this particular method of administration turn out to be the answer for cancer of the breast or for any other cancer perhaps is not important but the important thing, I believe, is that we now have such a program set up where the various drugs can be evaluated rapidly so that when we do come upon the proper drug it will not take many years to find the truth.

The surgeon may look with pride at his accomplishments in the treatment of cancer. Many patients are alive today who except for the efforts of the surgeon would be dead. The thoughtful surgeon obviously must analyze why he is successful with one patient and why he fails in his efforts to save the life of another patient. As far as I can ascertain at the present time, it would appear that his successes are multiple in those patients in whom the tumor is confined to the organ in which it arose at the time he has an opportunity to treat that patient, whereas his successes are few indeed among those patients when the tumor has spread beyond the original organ in which it arose. Our abiding attention should be directed, therefore, to all efforts on our own part in the education of the

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ENDOSCOPIC CURVES*

FRANCIS L. MCNELIS, M.D.

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IF EVERY OPPOSING PITCHER would throw only fast balls through the strike zone, our Boston Red Sox would be undoubtedly in a much higher position in the league standings than they enjoy today; however, to keep the game from being a dull repetitious routine, the pitcher will throw an occasional curve ball that often will make the unprepared batter swing at the thin air.

I like to draw this comparison with our work and shall present a few of the cases I have seen which keep our work from being a dull repetitious routine. As a matter of fact, I hope to illustrate something further and that is; that endoscopy is an important and valuable diagnostic tool which rightfully belongs in the hands of the otolaryngologist. In some areas, there is a tendency to assign the pre-operative diagnostic workup to the surgeon if chest surgery is anticipated, with only the occasional foreign body removal being directed to the otolaryngologist. If we continue to tolerate such a situation, we shall find a rapid deterioration in our proficiency and thus lessening in the caliber of work in this field. Historically and by basic training, endoscopy belongs to the otolaryngologist. With the following group of cases, I hope to demonstrate definitely to you that we have a place in diagnostic endoscopy.

FIGURE 1

Figure No. 1 shows two chest films taken one month apart on a sixty-five-year-old white male who was treated with antibiotics for pneumonia. The film on the right shows clearing of the pneumonic process; but now an area of increased density is apparent in the left lower lobe, and also shift of the mediastinum to the left. There was persistent productive cough, but no weight loss. One episode of hemoptysis had been noted. Physical examination showed bronchial breath sounds over the left posterior chest. Bronchogenic carcinoma was suspected and a diagnostic bronchoscopy performed to obtain cell washings and biopsy if possible. To my surprise, a hard sliver of pork bone was wedged in the lower left main stem bronchus which was removed bronchoscopically using forward grasping forceps. Post-operatively, the patient then recalled having a choking and coughing attack about two years prior to admission while eating. He thought he had swallowed a bone but believed it would pass and had no further need of investigation.

Case No. 2 is a seventy-year-old white male who was seen at the Rhode Island State Hospital for Mental Diseases. He had been a patient there for ten years when I was asked to see him in consultation because of a cough of six months' duration and hemoptysis of two months' duration. Physical examination showed many rales to be present over the lung fields. Carcinoma was suspected since there had been a thirty-pound weight loss in the past six months in this long-time chain smoker. On bronchoscopy, granulations were found in the middle third of the left main stem bronchus. This was the site of his hemoptysis and projecting upward was a sharp-pointed foreign body. It was easily removed and found to be a curved piece of bone from a chop measuring 1.8 cm. in length, 1 cm. thick at the base and 0.6 cm. wide. This man had many auditory hallucinations as well as delusions of persecution; therefore, it was quite easy to overlook a progress note made some six months before which referred to the patient's refusal to eat food. "Food is not good for me. It goes into my chest and causes the little men there to bother me."

Case No. 3 was a sixty-five-year-old retired white male who gave a history of upper respiratory infection about one month prior to admission followed by dry cough and substernal pain. Figure 2 is his chest X-ray showing a right upper lobe atelectasis. A tumor was suspected, and even Pancoast tumor was mentioned; but accompanying signs were not present. As a further diagnostic aid, tomography was performed and showed a foreign body at the

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*Presented at the Spring Meeting of the New England Otolaryngological Society, at Rhode Island Hospital, Providence, Rhode Island, May 17, 1961.

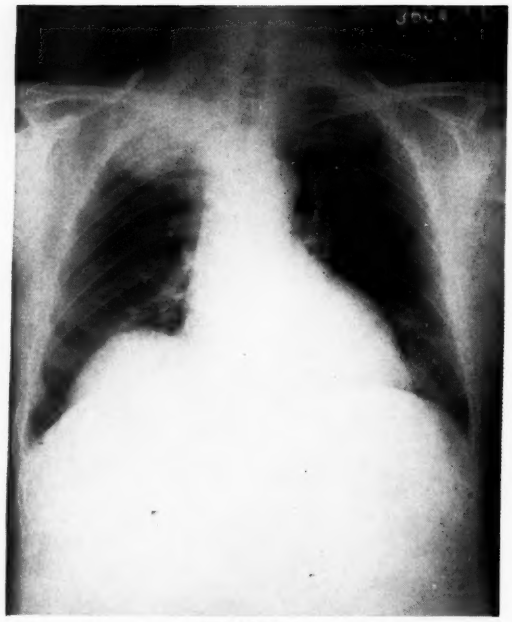

FIGURE 2

13 centimeter level. Unfortunately, this was not reported until after a piece of chicken bone had been removed bronchoscopically. It was found with pointed end wedged in the right upper lobe bronchus, the broad end protruding into the main stem bronchus. Post-operatively, the patient remembered having choked on some chicken three weeks before at the same time he had a cold. A follow-up film three months later showed complete resolution of the atelectatic area in the right lung field.

These three cases are considered to be curves because the pre-operative impression was question of carcinoma, while the actual diagnosis was bronchial foreign body. They further tend to emphasize the basic importance of complete history, X-ray, and the use of all applicable diagnostic facilities. Finally, they are all ear, nose, and throat problems which are best handled by the man who, by training and daily work in specular examinations, has the manual dexterity.

Case No. 4 is that of H. S., a fifty-three-year-old colored male, who one month prior to admission complained of marked difficulty in swallowing solid foods and fluids, except milk. He had a considerable weight loss and an aspiration-type pneumonia. Naturally, one of the first requests made was for a barium swallow X-ray. This showed a large diverticulum (Figure 3). Its mouth was noted to be wide-necked, and only a tiny trickle of the barium passed from it into the esophagus on the distal side. It was so directed that its distal extremity was to the right of the midline. Ideally, all of these cases should have a preliminary endoscopic evaluation; but often this step is omitted. Fortunately, in this particular case, the surgeon requested endoscopic guidance during his procedure. As the esophagoscope was introduced, a normal cricopharyngeus was encountered; however, just distal to this there was a large dilatation with an irregular mass. The opening to the lower esophagus could not be located.

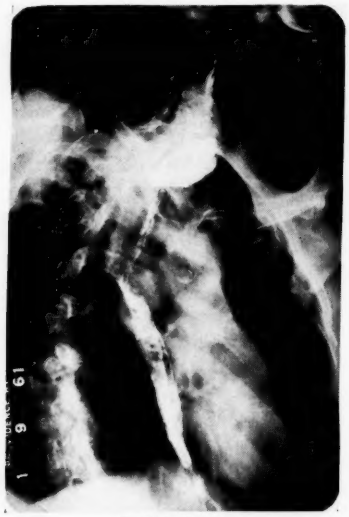

FIGURE 3

A biopsy specimen was obtained, and the frozen section diagnosis was epidermoid carcinoma. Therefore, the external approach was not attempted, and a difficult and unnecessary surgical exercise eliminated. The patient instead had a gastrostomy and palliative X-ray therapy. He succumbed in about six weeks, but the suffering which would have resulted from the contemplated surgery was eliminated.

T. C. was a sixty-two-year-old white male who came to my office complaining of increased dysphagia of one week's duration with obstruction of one day's duration. A barium swallow was obtained and approximately four inches above the level of the esophageal hiatus almost complete obstruction was encountered (Figure 4). Above the level of

FIGURE 4

obstruction, the esophagus showed some dilatation, but it was not otherwise remarkable in appearance. It was the impression of the radiologist that the changes in the distal esophageal segment represented a stricture on the basis of an inflammatory process, such as an esophagitis, which in turn would seem to be associated with hiatus hernia of the stomach. An esophagoscopy was performed and a large particle of undigested meat was removed with fenestrated meat forceps. Because of the mention of stricture, the esophagoscope was reintroduced to inspect the area beyond the impaction. At a point 35 cm. from the upper alveolar ridge an inflamed area was encountered which posteriorly was covered by a white membrane. This bled readily when disturbed. At the cardia, the tissue appeared to be firm and nodular. A biopsy specimen was obtained from this area. There was considerable inflammatory change in the entire lower esophagus due to the impacted foreign body, but it was my impression at the time that there was an underlying carcinoma. Histological examination of the biopsy specimen confirmed this, the diagnosis being adenocarcinoma. Surgery was advised but the patient refused and, therefore, was treated with cobalt irradiation. He improved during therapy but after about two months, he again became obstructed and sought surgery. He was explored but his tumor proved to be inoperable, and he died about one month later.

One final case is that of a thirteen-month-old male who was referred to the hospital because of noisy respirations from birth. A laryngoscopy showed the vocal cords to be normal in appearance and mobility. There was good structural support, and the upper glottis was not flabby as in laryngomalacia. Furthermore, the obstruction was not relieved, as is so often the case, by holding the blade of the laryngoscope in the upper laryngeal aperture. Therefore, an esophagram was performed using Lipiodol (Figure 5). This was reported as showing a smooth concave depression in the right side of the upper esophagus at the level of aortic arch.

FIGURE 5

There was a similar concave depression on the left side of the esophagus in this same area but at a slightly lower level, and there was a persisting narrowing of the esophagus with some interference to the passage of the opaque media at this level. The appearances in the upper esophagus were interpreted as being consistent with a congenital anomaly of the great vessels most likely a double aortic arch. Because at the time of treatment, his symptoms were so mild, surgery was deferred for two years. When finally performed, a double aortic arch was found with the right limb being the larger of the two. The left limb which went around to the left of the trachea and behind the esophagus was quite small. The latter was divided and a great deal more room for the esophagus and trachea to bulge to the left and forward was obtained. Today, the patient is a healthy normal eleven-year-old boy.

The first three curves that we analyzed seemed to be problems that would require thoracic surgery but they were truly ear, nose, and throat problems in that they were foreign bodies and were cured by an operative bronchoscopy. The last three cases had the appearances of routine ear, nose, and throat problems, but proved to be problems which required thoracic surgery. Therefore, I do not feel that the field of endoscopy can or should be split. The endoscopic and thoracic surgeons should be able to work harmoniously as members of a team dedicated to offering the very best possible service and treatment to the patient. The two fields, otolaryngology and thoracic surgery, should supplement each other rather than overlap, and the men involved should work in a spirit of friendly co-operation, rather than competitive rivalry. The thoracic surgeon's interest is primarily in treatment of malignancy but the diagnosis of this condition in today's practice encompasses a large percentage of the total endoscopies performed. However, none the less important are the study of the infant air and food passageways, the tuberculous chest, the burned esophagus, the cause and treatment of hemoptysis and hematemesis, and last but not least, the always intriguing mechanical problem of removing difficult foreign bodies. The Council on Medical Education and Hospitals in its Essentials of Approved Residencies in Otolaryngology requires an adequate experience in bronchoesophagology. For this reason, all endoscopic work at the Rhode Island Hospital has been limited to the Department of Otolaryngology. We feel duty bound to see that our residents have sufficient clinical material, and without the diagnostic workup of malignant pulmonary lesions, we do not feel able to give them adequate experience.

There are many of these "curves" in all branches of medicine, and it is the unusual case, and the case with complications that has brought about our

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CARCINOMA OF THE EXTERNAL AUDITORY CANAL*

ARTHUR B. KERN, M.D.

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CARCINOMA of the external auditory canal is a rare entity. Bezold,[1] for example, saw only three cases out of 20,000 otologic patients over a period of twenty-four years. Nevertheless, since early diagnosis and treatment of this type of malignancy is so important, it is my opinion that presentation of the following case report may be of value in focusing attention on the various characteristics of this entity.

Report of a Case

The patient, a fifty-three-year-old female, was first seen in 1958 with the chief complaint of dryness and itching of the ears of many years' duration; oozing of the right ear canal had been noted off and on during the previous few months. Examination disclosed some serous fluid in the right ear canal and scaling of the scalp. The diagnosis of otitis externa on a seborrheic basis was made. Two months later, after a course of local therapy, her ears were asymptomatic and examination disclosed no abnormalities. She was next seen seventeen months later and reported that there had been occasional dryness and itching of the ears, particularly the right, and that during the past few weeks there had been pain in the right ear canal. Examination disclosed scaling of the left canal and erythema, superficial erosion and slight purulent discharge in the right canal. The patient returned three months later and stated that the pain in the right ear had persisted despite the use of Aerosporin® Otic Solution. Examination then revealed a mild amount of crusting in the right external auditory canal. The degree of visible involvement did not seem enough to explain the pain described, and it was recommended that she consult an otologist.

The following day she was seen by Doctor Mendell Robinson of Providence who kindly supplied the following information. Examination showed a moderate amount of purulent debris in the right ear canal. This was removed and an area of granulation was noted on the floor of the canal. Five days later, after use of Cortisporin® Otic Solution, much less discharge was present but the granulation was still evident. The latter was removed under general anesthesia. The histopathological report, confirmed by several pathologists, was epidermoid carcinoma, grade II. She was referred to Doctor Daniel Miller of Boston who resected the entire area. Several weeks later the granulation was found in the mastoid cavity. This was removed and found to be epidermoid carcinoma. She was then started on a course of radiation therapy in the Radiation Therapy Department of the Massachusetts General Hospital. As of March 1961, fifteen months after treatment, there has been no obvious recurrence.

Discussion

The most frequently encountered malignancy of the external auditory canal is squamous cell carcinoma; only rarely have sarcoma, basal cell epithelioma, or other types of malignancy been reported in this location. The triad of symptoms which typically accompany carcinoma of the canal are: (1) severe pain, (2) chronic discharge, and (3) impairment of hearing. In many instances the triad is not complete but pain is almost always present. Findings on otoscopic examination may vary from what appears to be a small amount of granulation tissue in the early stage, to a mass that may fill the canal in the more advanced stage. Frequently the discharge present may make visualization of the tumor difficult. With progression of the tumor there is local extension with involvement of bone or vital structures and later metastasis to regional lymph glands. If the primary lesion is not checked, death usually occurs from local extension to vital structures.

Early diagnosis of squamous cell carcinoma of the external auditory canal is imperative. Accordingly, biopsy of any suspicious looking lesion in this region is indicated. Treatment generally employed involves surgical excision followed by X-ray therapy.

*Presented at the Fourth Annual Meeting of the Noah Worcester Dermatological Society, March 23, 1961, at Nassau in the Bahamas.

SUMMARY

1. A case of squamous cell carcinoma of the external auditory canal is reported.

2. Severe persistent pain in the ear, particularly if associated with chronic otitis externa, impairment of hearing, or both, should alert the physician to the possibility of carcinoma of the canal.

3. Early diagnosis and therapy are imperative.

REFERENCE

[1]Bezold, cited by Peele, J. C., and Hauser, G. H.: Primary Carcinoma of the External Auditory Canal and Middle Ear. Arch. Otolaryny. 34:254 (Aug.) 1941

A SURGEON LOOKS AT CANCER

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general practitioners who see these patients first, in the education of the patients themselves through such agencies as the American Cancer Society to get the patient to the surgeon as soon as possible regardless of the location of the tumor.

On the other hand, the thoughtful surgeon must be aware that in order to make a real imprint upon the cancer problem we must look elsewhere. Whether it will be a vaccine, a chemical, an antibiotic, the use of electric currents or what, it is obvious that some other modality is needed to influence profoundly the course of this disease. I, for one, am sure that such a solution will be found. By what method this solution will be brought about, of course, I do not know, but I hope that not only will many of us live to see that solution but that many of us may in some small way help to bring that solution about.

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present system of specialization in medicine. Therefore, what could be more highly specialized than the visualization and operation through tubes of varying lengths with the lumen of 8 millimeters or less? Anyone can learn the mechanics of inserting the tube properly, but only with long experience can the interpretation and art of manipulation be mastered. I feel further that the otolaryngologist is the man who is in the best position to gain the wide experience to cover the over-all field of endoscopy, and that every attempt should be made by the departments of the hospital to develop and utilize his talents. The six cases I have presented were referred from a radiologist, a psychiatrist, an internist, a general surgeon, a general practitioner, and a pediatrician.

In conclusion, may I again urge that endoscopy be considered an important and proper part of otolaryngology. This is an obligation which we have to the patient, to the resident in training, to other departments of the hospital struggling with diagnostic problems, and to our colleagues in the field of otolaryngology, who are ever trying to improve and enlarge the specialty.

[The Kefauver-Celler Bill] poses a real and present danger to the drug industry, but also to the vastly greater area of freedom that includes freedom for American business and for Americans. If this bill becomes a model, then no area of American life is free from the threat of increasing central control, increasing bureaucratic conformity, and decreasing individual freedom. The American medical profession is also under attack. We are asked to believe that the only way to provide our senior citizens with adequate medical care is by compulsory payroll taxes on all wage earners, by compulsory programs of insurance, by compulsory participation in one massive, rigid, government-controlled scheme.... What sense does such a proposal make? It makes no good sense at all, except in an America that has given up its heritage of freedom and joined the dull, drab ranks of the bureaucratic superstate.

—RICHARD M. NIXON to Pharmaceutical Advertising Club, June 27, 1961

Sesquicentennial Celebration Dates

EXPOSITION OF HEALTH PROGRESS

April 6-16, 1962

Cranston Street Armory

CARDIAC ARREST*

J. JOHN YASHAR, M.D.

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DURING THE PAST several decades, in spite of improvements in pre- and postoperative care of patients and increased knowledge of cardiorespiratory physiology, the incidence of cardiac arrest has markedly increased. This increased frequency has been attributed to combinations of various anesthetic agents, newer anesthetic agents, more frequent operations on the cardiovascular system, and surgery on poor risk, old, or debilitated patients. Review of the recent literature reveals that the incidence of cardiac arrest varies from one to one thousand up to one to three thousand operative cases.[1-7] Stephenson on the basis of reports from 30 large medical centers estimated this incidence as one per 2,125 operations.[8]

In 29,716 operations at the Miriam Hospital during the six-year period 1955-60 there were 20 cases of cardiac arrest (one per 1,485). If cases occurring during or after cardiac surgery are excluded the incidence would be one per 2,071 operative cases. It is the purpose of this study to evaluate various factors related to this unfortunate accident in the hope of better understanding its causes.

Place of Arrest

The majority of arrests occurred in the operating room during the operative procedure (Table I). Arrest also occurred in the recovery room, in the elevator while the patient was being returned to his room, and in the patient's room.

TABLE I
Place of Arrest

Place	No. of Cases
Patient's Room	2
Elevator	2
Recovery Room	1
Operating Room	15

*From the Surgical and Cardiopulmonary Departments, the Miriam Hospital, Providence, Rhode Island. Read at the Providence Surgical Society meeting, February 13, 1961.

Type of Anesthesia

Types of anesthesia were as follows: local and topical 3, spinal 2, and general 15. A wide variety of anesthetic agents were used (Table II). The majority of patients received sodium pentothal and nitrous oxide. The role of various anesthetic agents is difficult to evaluate, because it is common practice to use several anesthetic agents during an operative procedure. The dangers inherent in such a practice have been stressed by Dinsmore.[9] Six patients (30 per cent) received no preoperative medication. Five of these patients underwent emergency operation, and, due to the poor condition of the patient prior to surgery and the emergency nature of the procedure, no preoperative medications were given. In the remaining cases preoperative medication usually consisted of atropine and Demerol® according to the size, weight, and age of the patient.

TABLE II
Agent Used for General Anesthesia

Agent	No. of Cases
Na. Pentothal and Nitrous Oxide	5
Na. Pentothal and Ether	2
Na. Pentothal and Succinocholine	1
Cyeloprocaine and Ether	3
Vinethine and Drop Ether	3
Total	14

Time of Occurrence

The time of occurrence of cardiac arrest varied from a few minutes after induction of anesthesia up to about 14 days after the completion of surgery (Table III). In two patients who underwent bronchoscopy, the occurrence of cardiac arrest was instantaneous with the introduction of the bronchoscope. In two patients under spinal anesthesia cardiac arrest occurred four to five minutes after intrathecal administration of anesthetic agents. In the laparotomy cases the occurrence of cardiac arrest varied from the time of peritoneal incision (during a liver biopsy under local anesthesia) up to 25 minutes after the completion of surgery. In thoracic and cardiovascular cases the majority of cardiac arrests occurred during the difficult part of surgery, during manipulations inside the heart, or around the great vessels.

TABLE III

Time of Arrest in Relation to Beginning of Anesthesia

Time	No. of Cases
1-2 Min.	2
4-5 Min.	2
7-10 Min.	1
15-20 Min.	2
1 Hour	5
2 Hours	3
4 Hours	1
5 Hours	2
6 Hours	1
14 Days	1

Warning Signs

More than half the patients had no warning sign prior to cardiac arrest (Table IV). In the remainder hypotension, irregular heart beat, short period of apnea during spinal anesthesia, dyspnea, chest pain, and vomiting preceded the occurrence of cardiac arrest. In one patient who underwent liver biopsy under local anesthesia and who was receiving cortisone therapy prior to the operative procedure no cortisone was given during the operation.

TABLE IV

Warning Signs

Hypotension	3
Irregular beat	2
Apnea	1
Dyspnea, chest pain and vomiting	2
Cortisone therapy	1

Etiology

In almost half of the entire group there is evidence that hypoxia, and possibly hypercapnia, played a major role in the production of cardiac arrest (Table V). In six patients inadequate respiratory exchange was the major cause. Massive hemorrhage and inadequate replacement of the blood loss was the major factor in two patients. Aspiration and blockage of the airway was considered a primary cause in one patient. In four patients vago-vagal reflex appeared to be a major factor in the cardiac arrest. In two of these patients hypoxia coupled with vago-vagal reflex appeared to be the precipitating factor. Primary arrhythmia during cardiac and thoracic surgery, either during hypothermia or extracorporeal circulation, was considered to be the cause in four patients. In two cases it was impossible to assign a definite cause since important facts concerning the conduct of anesthesia and the degree of surgical manipulation were not recorded. It is possible that in these cases vagal stimulation was the primary cause of cardiac arrest.

TABLE V

Primary Causes of Cardiac Arrest

Cause	No. of Cases
Anoxia:	
Hypoxia	6
Hemorrhage	2
Aspiration	1
Vagal Stimulation:	
Direct	3
Reflex	1
Arrhythmia	4
Acute Adrenal Insufficiency	1
Unknown	2

Contributing Causes of Cardiac Arrest

Myocardial damage either as a result of coronary insufficiency, arteriosclerotic heart disease, or heart failure are thought to be contributing causes in six patients (Table VI). All of these six patients were considered to be poor risks preoperatively. Five patients received more than five transfusions prior to the cardiac arrest. The average transfused blood was about 9½ days old. It is possible that in these patients the high potassium content of the banked blood, which increases with the length of storage, played a role in the production of the cardiac arrest.

TABLE VI

Contributing Causes of Cardiac Arrest

Causes	No. of Cases
Arteriosclerotic Heart Disease	6
Heart Failure	1
Hypertension	1
Massive Transfusion	5
Asthmatic	1
Apprehension	1

Duration of the Arrest

In fourteen cases the duration of cardiac arrest varied from a few seconds up to six minutes prior to resuscitative measures. In the remaining patients the duration of cardiac arrest was not mentioned in the record. It is likely that in these cases the standstill was five minutes or longer prior to effective resuscitative measures.

Treatment

With two exceptions cardiac massage through the thoracotomy incision was the major therapeutic method. In two patients no attempt at cardiac massage was made. A variety of drugs such as atropine, calcium chloride, adrenalin, prostigmin, neosynephrine, and potassium chloride were used in addition to the defibrillator and cardiac massage. Calcium chloride in 10 per cent solution was used for flabby hearts during arrest, or where the heart beat appeared to be ineffective after resuscitative measures. The response was usually dramatic with great improvement in the cardiac tone and contraction. The drug was injected in the left ventricle, and the injection was followed by cardiac massage for coronary circulation. Atropine was usually used in bradycardia with a satisfactory response. Vasopressive drugs such as adrenalin and neosyne-

continued on next page

phrine, were used for periods following adequate cardiac massage with no sign of cardiac activity and in cases with low cardiac output after resuscitative measures. In severe hemorrhage where restoration of blood volume appeared to be of prime importance intraarterial transfusion of whole blood was given. Ventricular fibrillation occurred as a primary arrhythmia in only one case which was satisfactorily treated with the electric defibrillator. However, ventricular fibrillation occurred during resuscitative measures for cardiac standstill in a number of patients. Although the ventricle almost always could be defibrillated by electric defibrillator, no patients survived.

Results

Complete recovery was attained in four patients without any cerebral or cardiorespiratory sequelae. Cardiac function alone was restored in seven patients. All these patients had cerebral damage evidenced by deep coma, convulsions, high fever, and, on one occasion, paraplegia. These patients died from 12 hours to three days after cardiac arrest. In seven patients resuscitative measures were not successful, and the heart beat could not be revived. The majority of these patients were old and of poor risk, and had associated cardiac pathology (Table VII).

TABLE VII
Results of Resuscitative Measures

Result	No. of Cases
Complete Recovery	4
Cardiac Function Alone Restored	7
Failure	7
No Massage	2

Discussion

Unexpected cessation of the heart beat is the most serious of all operating room incidents. Among our cases no common denominator could be found. Although the majority of arrests occurred in the operating suite, arrest in the recovery room, in the elevator, or in the ward was not unusual. It occurred at any time during the operative procedure. There was no correlation with the type of procedure (Table VIII), age, or clinical condition of the patient. Hypoxia and vago-vagal reflex appear to be the major etiological factors in the production of cardiac arrest. Administration of banked blood with a high potassium content, lack of preoperative medication, and pre-existing heart disease were the major contributing causes. In patients with pre-existing heart disease there was not only a higher incidence of cardiac arrest (two to one), but also a much lower chance of complete recovery than in non-cardiacs. It must be emphasized that the two most important factors in the management of cardiac arrest are time and preparedness. In seven patients in whom cardiac massage was instituted as soon as the diagnosis was established there were three complete recoveries (Table IX). However, in the remaining patients in whom the duration of cardiac arrest was more than a few minutes, only one patient survived. Even though the hearts in some patients were resuscitated, cerebral damage and eventual death ensued.

TABLE VIII
Type of Operation

Cardiac Surgery	6
Laparotomy	4
Aortic Surgery (Thoracic)	3
Bronchoscopy	2
Pneumonectomy	1
Pectus Excavatum	1
Vascular Surgery	1
Cystoscopy	1
Hip Nailing	1

TABLE IX
Approximate Duration of Cardiac Arrest at the Time Resuscitation Was Begun

Duration	Total Cases	Cardiac Function Alone Restored	Complete Recovery
> 1 Min.	7	2	3
2-4 Min.	4	1	0
4-6 Min.	3	2	1
Unknown	4	1	0

Summary and Conclusion

Of primary importance in coping with the problem of cardiac arrest is the elimination of factors that may initiate hypoxia and vagal stimulation. Upon recognition of warning signs at any stage of operation, such as hypotension, irregular heart beat, bradycardia, and cyanosis, the alarm must be sounded. Resuscitative measures must be undertaken as soon as the diagnosis is established. They may not be delayed more than a few minutes if there is to be any hope for complete recovery. General measures include careful preoperative evaluation of the patient; preoperative vagal inhibition with atropine, and additional dosage during prolonged operative procedures; adequate oxygenation and ventilation; close observation of changes in cardiac rate, rhythm, and blood pressure; gentle surgery; adequate replacement of blood loss and use of fresh blood where massive replacement is required; and constant attendance upon the patient. Frequent reminders to the staff of the causes, methods of prevention, and treatment of cardiac arrest are essential.

Addendum

Since the original description by Jude[10] and associates of closed chest cardiac massage, we have

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CONTINUOUS ARTERIAL INFUSION CANCER CHEMOTHERAPY*

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INTRODUCTION

INCREASING NUMBERS of cancer chemotherapeutic agents are available for use in the management of far-advanced malignant neoplasms. However, definitive clinical studies have demonstrated that the usefulness of these compounds is largely limited to the leukemias and lymphomas. The vast majority of human neoplasms has shown only slight and variable response to these chemotherapeutic compounds. The different classes of compounds that have received some clinical trials include the alkylating agents,[1,2] antimetabolites (including the purine analogues,[3] pyrimidine analogues,[4] and antifolic compounds[5]), antibiotics[6] and miscellaneous compounds.[7]

Over the past ten years our program has been designed to enhance the antitumor effects of cancer chemotherapeutic agents by regional administration. It has been shown that the arterial administration of nitrogen mustard will produce profound local effects on normal structures as well as regressive effects on a variety of tumors that have not been observed after the intravenous use of this drug.[8,9] The practical usefulness of this form of therapy, however, is sharply limited by the lack of specificity of nitrogen mustard.[1,10] Preliminary studies were undertaken to investigate the effects of the arterial administration of chemotherapeutic agents that have a more specific antitumor and antimetabolic effect[11-14] than have the alkylating agents. Over the past several years, a number of antimetabolites have been studied by this route of administration, including the glutamine antagonist, O-diazoacetyl-L-serine (Azaserine), the pyrimidine antagonists, 5-fluorouracil and 5-fluoro-2′-deoxyuridine, and the antifolic compound, 4-amino-n[10]-methyl pteroylglutamic acid (Methotrexate).[15] Antimetabolites, however, require a more prolonged period of action before clinical antitumor effects are produced.[5,16] It seemed reasonable, therefore, to prolong the duration of administration of an antimetabolite in order that those cells which at any given moment are in a metabolically inactive phase might be affected by the antimetabolite as they sequentially enter a metabolically active phase. Since the biologic effect of many antimetabolites can be effectively prevented by the concomitant administration of the specific metabolite (antidote),[17,18] it was postulated that the continuous arterial (regional) administration of supralethal doses of an antimetabolite together with the intermittent use of the metabolite (antidote) administered systemically (i.e., intramuscularly) might result in an enhanced differential antimetabolic effect in the regional area, while the vulnerable systemic areas of the body were protected by the antidote.

A method of therapy has been developed embodying these hypotheses as follows: the continuous 24-hour administration of an antimetabolite through a catheter inserted into a known site in the arterial blood supply of localized forms of far-advanced cancer, together with the intermittent, intramuscular administration of the specific antidote. Preliminary clinical studies using Methotrexate as the antimetabolite and citrovorum factor (leucovorin, C.F.) as the metabolite have been described in patients with various forms of localized, but far-advanced cancer.[19-21] This method of therapy is to be distinguished from the extracorporeal isolated perfusion[22] which embodies the temporary exclusion of the tumor-bearing area from the general circulation for periods of 30 to 60 minutes, during which time high concentrations of a drug are perfused in the isolated part. The purpose of this communication is to describe our further experiences with this method of therapy in patients with far-advanced cancer.

Methods

Selection of Patients. Patients with advanced cancer who were not considered suitable candidates for conventional therapy were selected for study. Patients with various types of primary head and neck cancer without known metastases or with cervix or bladder cancer confined to the area of the pelvis are the most suitable candidates for study.

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*Presented at the Annual Joint Meeting of the Rhode Island Medical Society and Rhode Island Cancer Society, at Providence, Rhode Island, March 7, 1961.

In some instances a patient with an inoperable primary form of head and neck cancer but with unilateral or bilateral resectable neck nodes was a candidate for combination surgery and arterial infusion chemotherapy. In this situation the neck metastases can be controlled with radical neck dissection while the inoperable primary lesion can be treated by arterial chemotherapy. Patients with symptomatic metastases outside the areas of infusion, whose disease in these areas could not be controlled by other means, were not suitable candidates for this form of regional chemotherapy. Patients who had previously had radiotherapy whose recurrent or unresponsive disease is within the distribution of one or more accessible arteries were suitable candidates for a trial of infusion therapy.

Catheter Insertion and Infusion Assembly. The catheter was prepared from PE-60 Clay-Adams polyethylene tubing with an inside diameter of 0.030 inches and an outside diameter of 0.048 inches. The technique of catheter insertion is as follows: After adequate exposure of at least one inch of the artery into which the catheter is to be placed, a No. 4-0 silk purse-string suture is applied to the most proximal part of the exposed vessel. Hemostasis is obtained with a Beck-type arterial clamp, an incision is made in the center of the purse-string, and the catheter is inserted by means of a No. 4-0 catgut suture applied to the end of the catheter (Fig. 1A). The purse-string suture is tied as the hemostatic clamp is removed. In order to prevent subsequent displacement of the catheter, a No. 3-0 silk suture is applied to the catheter as it issues from the vessel sufficiently tight to groove the catheter wall. A free end of this suture is passed through the adjacent arterial wall and snugly tied.

A fluorescein dye injection technique is used to determine the exact area of infusion. The dye is injected while the patient is in the operating room before the wound is closed in order to ascertain whether the tumor is within the area of infusion therapy. A total of 3 to 6 cc. of Fluorescite is injected into the catheter slowly over a period of about one minute. Fluorescence of the area of infusion develops within a few seconds and will persist up to 30 minutes. Ultraviolet illumination will delineate the capillary bed to be infused. In the external carotid area, fluorescence will be seen through the distribution of this vessel to the midline including the skin of the upper neck, face and scalp, the tongue, palate, oral and nasal mucosa, and so forth. A variable amount of absence of fluorescence is noted in the palpebrae and forehead areas, as these areas are supplied by the terminal branches of the internal carotid arteries. If the catheter has been inadvertently inserted into the internal carotid artery, only the latter areas will fluoresce. Injection

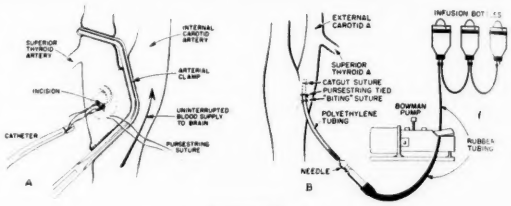

FIGURE 1A
Technique of catheter insertion

FIGURE 1B
Infusion assembly

of dye into a catheter situated in the hypogastric artery will produce fluorescence of the pelvic viscera and pelvic walls on the side injected. Fluorescence will also be noted in the skin of the gluteal and perineal areas, the anus, vagina, scrotum and the glans of the penis.

In patients with bilateral head and neck cancer, catheters are inserted into both external carotid arteries through bilateral neck incisions. In patients with cervix or bladder cancer, catheters are usually inserted into both hypogastric arteries. The surgical approach is through a single midline, transperitoneal incision, or extraperitoneally, via bilateral incisions. The external carotid catheter is brought out through the inferior margin of the skin incision and without fixation to the skin. The catheter in the hypogastric artery is brought through the anterior abdominal wall in the region of the anterior superior iliac spine, using a large bore needle. The catheters are flushed with saline solution and the proximal end is clamped. The clamp is affixed to a convenient site with adhesive tape, leaving sufficient slack to permit free movement.

The infusion assembly is put in operation as soon as the patient has recovered from the operation and glucose and water or saline solution is infused to keep the catheter patent; therapy may be instituted at any suitable interval, depending on the patient's general condition. A No. 20 gauge intravenous-type needle is inserted into the free end of the catheter and the former attached to rubber tubing which passes through the fingers of a Bowman infusion pump and is connected through a drip chamber to liter bottles of infusate (Figure 1B).

Dosage Schedules. The usual dose schedule for unilateral catheterization was Methotrexate, 50 mg. per 24 hours, infused in 1000 ml. of saline solution or glucose and water. The dose schedule for bilateral catheterizations was Methotrexate, 25 mg. per side per 24 hours, infused in 1000 ml. of glucose and water or saline solution per side. Multiple liter bottles were set up in tandem to obviate the possibility of air embolism resulting from the inadvertent emptying of a single infusion bottle. Citrovorum

factor (antidote) was given intramuscularly in the dose of 6 mg. every six hours. On these dose schedules an adequate course of therapy required five to ten days of continuous arterial infusion. An adequate course of therapy is defined as that amount of therapy that results in moderate local toxicity (diffuse unilateral or bilateral superficial mucosal ulcerations or erythema of the skin) or systemic toxicity (diffuse oral mucosal lesions, hematologic depression). At the completion of an adequate course of therapy, the patient was rested and the catheter kept patent with the continuous infusion of glucose and water or saline solution. Further courses of therapy were given until maximal clinical benefit was obtained. In most cases, maximal clinical benefit was noted after one to three courses of therapy had been given. The hemogram is followed closely in order to prevent serious systemic toxicity from the large doses of Methotrexate used. After the third day, the white blood cell count is obtained every 12 hours. When evidence of systemic toxicity is present, therapy is immediately discontinued or the amount of antidote (C.F.) is increased. Patients with renal insufficiency do not excrete Methotrexate in a normal manner. Considerably larger doses of the antidote may be required to prevent severe systemic toxicity.

Results

Fifty-one patients with various types of advanced head and neck cancer have had unilateral or bilateral external carotid catheterization as follows: epidermoid carcinoma, 43 patients; lymphosarcoma, six, and miscellaneous forms of cancer, two (Table 1). There were 42 patients in whom at least one adequate course of therapy was given. An adequate course of therapy has been defined above and was considered to have been given when moderate local or systemic toxicity was noted. In four patients who received one adequate course of therapy the therapeutic effect was not evaluated because of the difficulty in determining the clinical extent of the disease; the therapeutic effect was evaluated in 38 patients. In 28 patients, there was *some* partial objective regression of tumor, often associated with clinical benefit. In the majority of these patients, cancer was present in contiguous areas outside the actual area of infusion therapy. In eight patients whose disease was confined to the area of therapy, *total* objective tumor regression was obtained.

Eleven patients with primary and metastatic brain neoplasms had unilateral or bilateral internal carotid catheterization as follows: primary brain tumors, five patients; metastatic brain tumors, four patients, and retinoblastoma, two patients. There were five patients in whom at least one adequate course of therapy was given and the therapeutic effects were evaluated. In two patients with primary brain tumors (glioblastoma multiforme) and one patient with metastatic (bronchogenic) carcinoma, evidence of partial objective tumor regression was present associated with clinical benefit.

Six patients with carcinoma of the cervix have had bilateral hypogastric artery catheterization. Five patients received at least one adequate course of therapy and the therapeutic effect was evaluated. In four patients there was partial tumor regression and in one patient, complete objective tumor regression.

In those patients in whom measurable disease was present in the areas of therapeutic infusion, response was noted as early as the fourth day and was characterized by a progressive decrease in visible tumor. The tumors appeared cleaner as they regressed and were apparently absorbed as the neoplastic cells were sequentially killed. Mucosa often covered the sites of absorbed tumor but in many

continued on next page

TABLE 1

Results of Continuous Arterial Infusion Cancer Chemotherapy

	Catheterization, No. of Patients	Adequate Course of Therapy, No. of Patients	Therapeutic Effect Evaluated, No. of Patients	Tumor Response Partial No.	Tumor Response Complete No.
Head and Neck Neoplasms (ext. carotid artery)					
Epidermoid carcinoma	43	34	30	23	6
Lymphosarcoma	6	6	6	4	2
Miscellaneous	2	2	2	1	0
Brain Neoplasms (int. carotid artery)					
Primary tumors	5	2	2	2	0
Metastatic tumors	4	2	2	1	0
Retinoblastoma	2	1	1	0	0
Carcinoma of Cervix (hypogastric artery)	6	5	5	4	1
Totals	68	52	48	35	9

cases large defects remained, especially in patients who had sinus tumors with extensive involvement of the hard palate.

In those patients in whom partial tumor regression occurred, response has lasted from one to three months. In those patients in whom total tumor regression occurred, response has persisted for follow-up periods of up to 18 months.

Complications relating to catheter insertion and maintenance of infusion assembly are tabulated in Table 2. Varying degrees of local or systemic Methotrexate toxicity were noted in most patients. The former was characterized by a mucositis and slight erythema of the skin within the areas of therapy. Systemic toxicity was characterized by varying degrees of hematologic depression and nonspecific oral ulceration. In most cases systemic toxicity was moderate and could often be controlled by adjusting the dose of the antidote. However, complete tumor regression occurred in several patients without the development of any manifestations of systemic drug toxicity.

Discussion

The results of this study demonstrate that the antitumor activity of an antimetabolite (Methotrexate) can be increased in patients with various types of far-advanced yet localized forms of cancer when given by regional administration (arterial infusion) in supralethal doses, together with the specific antidote (C.F.) given in appropriate dosage by the systemic route to protect vulnerable areas of the body.

The increased antitumor activity of Methotrexate noted in this study is considered to be related to the following factors: (1) The continuous 24-hour administration of the antimetabolite resulting in a *continuous* antimetabolic effect. Thus, with continued exposure of the tumor cells to the antimetabolite, those cells that at any given moment are metabolically inactive may be affected as they sequentially enter an active metabolic phase.[23] (2) The arterial route of administration resulting in a higher local concentration[24] and hence a greater local antimetabolic and antitumor effect. (3) The systemic use of the antidote permitting the administration of supralethal doses of the antimetabolite.

The complications of catheter insertion and maintenance of infusion assembly were frequent and often serious (Table 2). In six patients there was inaccurate catheter placement or premature displacement. In 12 patients, infection associated with varying degrees of bleeding occurred. In several patients, the hemorrhage was of such severity that ligation of one or more of the great vessels of the neck, and in one patient of the hypogastric artery, was necessitated. Leakage of infusate of varying degrees was noted in eight patients. In most of these patients the leakage prevented completion of the therapy.

Inaccurate placement of the catheter may be prevented by careful attention to techniques of catheter insertion and the use of the fluorescein dye technique to demonstrate accurately the area of infusion therapy. Premature displacement of the catheter results from the inadequate application of the "holding sutures" as the catheter issues from the artery. Infection around the catheter, in most cases the cause of hemorrhage, is usually the result of failure to observe rigid sterile precautions. It must be emphasized that the most meticulous sterile techniques must be used whenever the catheter or the infusion assembly is manipulated in order to obviate this serious complication of infection and hemorrhage.

Other methods of catheter insertion, including retrograde catheter introduction and the ligation of various arteries to develop collateral circulation into inaccessible areas, are being explored to extend the usefulness of this method of therapy and to reduce the complications of techniques currently in use. Other dose schedules of Methotrexate and C.F., as well as other cancer chemotherapeutic agents, are currently being investigated by this method of administration.

This method of therapy is in the area of clinical investigation and its possible place in the conventional therapy of various malignant neoplasms is not yet clearly defined. The casual use of this technique of drug administration is strongly dis-

TABLE 2

Complications of Catheter Insertion and Infusion Assembly

	Catheterization, No. of Patients	Inaccurate Placement or Premature Displacement, No. of Patients	Infection and/or Bleeding, No.	Leakage of Infusate, No.
External carotid artery	51	6	9	6
Internal carotid artery	11	0	1	0
Hypogastric artery	6	0	2	2

couraged; a team consisting of surgeons and cancer chemotherapists cognizant of the problems of techniques and drug toxicity, together with a carefully planned program of clinical investigation, is mandatory before initiating a program of regional infusion.

SUMMARY

A method of regional cancer chemotherapy is described which embodies the 24-hour arterial administration of supralethal doses of an antimetabolite, together with the intermittent use of the specific metabolite by the intramuscular route to prevent serious systemic toxicity. Clinical studies using Methotrexate as the antimetabolite and citrovorum factor (leucovorin, C.F.) as the metabolite are described in patients with far-advanced cancer of the head and neck, primary and metastatic brain tumors and carcinoma of the cervix.

Techniques of catheter insertion and fixation, maintenance of infusion assembly and dose schedules are reported. Fifty-one patients with various types of incurable cancer of the head and neck had unilateral or bilateral external carotid catheterization. In 42 patients at least one adequate course of therapy was given. The therapeutic effect was evaluated in 38 patients. Of these, 28 patients had partial tumor regression. In these patients, tumor was also present in contiguous areas outside the area of infusion therapy. In eight patients in whom tumor was present only in the area of therapy, complete apparent tumor regression occurred. Response persisted for one to three months in the former category and up to 18 months of follow-up in the latter category.

Complications were frequent and consisted of inaccurate placement of catheter or premature displacement of catheter in six patients, infection or bleeding, or both, around the catheter in 12 patients, and leakage of infusion around the catheter in eight patients.

Techniques are being explored to extend this method of therapy to other areas of the body, and other chemotherapeutic compounds are currently being investigated for possible enhanced antitumor effects resulting from continuous arterial administration.

This method of administration is in the area of investigation and its place in clinical medicine is not yet defined. The casual use of this technique is strongly discouraged. A team consisting of surgeons and cancer chemotherapists, aware of the many problems relating to techniques and drug toxicity, is mandatory before initiating a program of regional infusion in view of the rather high incidence of complications.

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CARDIAC ARREST

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utilized this technique in the laboratory and in a number of clinical cases. We are now convinced that the closed chest cardiac massage is as effective as the open technique.

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The Socialists Believe Federal Medical Aid is Socialist

EXTENSION OF REMARKS

of

HON. BRUCE ALGER

of Texas

In the House of Representatives

Wednesday, August 9, 1961

Mr. ALGER. Mr. Speaker, for those who claim that we who oppose federal medical aid unfairly term it socialistic, I call attention to an editorial, which I include herewith, from the *Wall Street Journal:*

Good for a Laugh

Some of our best friends are Socialists. In fact, they're shouting Socialists with whom we've broken many an argumentative lance. But the clash of convictions is good-natured; we always agree that socialism is what we're talking about, whatever name it may go by in the political marketplace.

Just the other evening, we were discussing "socialized medicine." Our friends didn't flinch at the phrase. No, it was agreed that once the government began taking care of the health of some of the people, political pressure ultimately would require the government to minister to all the people. Anything short of that would be rank social injustice.

In the course of our amicable debate, it was decided that the essential elements of socialized medicine (or whatever polite name the politicians gave it in the beginning) would be compulsory coverage, regardless of individual wish or need, and necessary government control of the huge outlays of public money required by such broad coverage. Sooner or later, the government would have to supervise hospitals, nursing homes and medical practitioners — anything and anybody handling the public business.

There was a footnote to our argument a couple of days later, when one of our friends called to ask if we'd seen what Welfare Secretary Ribicoff had said in Washington. Testifying in behalf of the administration's plan to provide medical care for 14 million elderly Americans under social security, Mr. Ribicoff was hotly indignant that anyone should call the scheme "socialized medicine."

Why, the secretary said, he personally had reviewed the plan and removed "all the elements which could be called socialistic." It gave our Socialist friend a good laugh.

, . . . CONGRESSIONAL RECORD, August 9, 1961

Editorials

II. HYPOCRISY IN THE DAILY PRESS

IN THE ISSUE of September 24, 1961, THE PROVIDENCE SUNDAY JOURNAL stated editorially: "Testimony before a Senate Committee by Abraham A. Ribicoff, secretary of Health, Education, and Welfare, places the Kennedy administration squarely in support of the pending measures to control the promotion and sale of drugs. Mr. Ribicoff stated it bluntly: 'The time has come,' he said, 'to give American men, women and children the same protection we have been giving hogs, sheep and cattle since 1913.'" The editorial then piously concludes: "The Kefauver Bill promises to clear up a muddy situation, eliminate some gross abuses in the sale of drugs, and give the public a measure of protection which is not only desirable but necessary."

This editorial comment appeared on page 37 of the news section. On page 41 of the same issue we found the following: "Get Fast Relief from the Itching and Burning of Hemorrhoids . . . contains an anaesthetic that *goes to work quickly* to relieve itching and burning . . . other medically effective agents help decongest annoying hemorrhoids, while promoting natural healing of irritated tissues," and so forth. There are other examples in the same issue. On page 13 of the television section (television listeners appear to be peculiarly vulnerable): "Lemon Juice Recipe Checks Rheumatic and Arthritis Pain. If you suffer rheumatic, arthritis, or neuritis pain, try this simple inexpensive home recipe that thousands are using. . . ." On page 4 of *The Rhode Islander*: "Protect Your Heart! . . . Wheat Germ Oil Helps Heart Action. Improves Strength, Vigor. . . ." On page 11 of the same section: "Arthritis, Rheumatism, Muscular Pains. Maybe you've tried just about everything to relieve such pains without luck. But have you tried . . . ? There's nothing in the world that's faster, safer, better for nagging moderate arthritis, Rheumatism or Muscle Pains. . . ." On page 28 of *This Week Magazine*: "Pain, Pain, Go Away! Try . . . for symptom relief in temporary painful conditions. When? In pain of menstrual distress, simple headaches, neuralgia, neuritis, temporary relief of minor aches of arthritis and rheumatism. How? Special formula reduces pain, fever. . . ." On the same page: "Live Your 'Golden Years' Without Laxatives. Growing older doesn't mean you *have* to take laxatives. . . . Take new. . . ." On page 31 of the same: ". . . are reducing aid wafers which supply bulk, the food substance that most dieters need but can't get from 900-calorie liquids alone. . . ." And on page 35: "Get to the Root of Athlete's Foot, Ringworm, Other Infections With New . . . and that fungus is dead forever! . . ." These, mind you, are all from *one* issue of THE PROVIDENCE SUNDAY JOURNAL.

It is difficult for us to believe that the editors and publishers of these papers are so naive as to believe that advertising of this nature constitutes a public service. Can it be that the advertising revenue is a factor? The writer's late father used to say wryly: "It isn't the principle of the thing; it's the money." But perish the thought! Surely some day these crusading newspapers may see fit to "give the public a measure of protection which is not only desirable but necessary."

BLUE CROSS–PHYSICIANS SERVICE STATES ITS CASE

ON SEPTEMBER 20, 1961, it was announced that the hearings before Mr. Harold C. Arcaro, Rhode Island State Director of Business Regulation, concerning proposed Blue Cross and Physicians Service rate increases had been recessed until October 17. As of this writing it is the intention of Blue Cross to present "some modifications" which might be considered "more acceptable." Before these columns are read, the hearings will have been resumed. We trust that the proceedings will not have been used to harass the "Blue" plans for the purpose of seeking political advantage. We commend their officers and administrators for the dignified conduct and co-operative spirit which they have manifested under rather considerable and largely unwarranted pressure.

We particularly wish to extend our compliments to Mr. Arthur F. Hanley, assistant director of Blue

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Cross and Physicians Service, for the excellent statement which he presented at the start of the hearings. This "Statement in Support of Rate Changes" is a 62-page document outlining under various headings the history, development, future, and problems of Blue Cross and Physicians Service. The narrative and the arguments are lucid, logical, and complete. The reasoning is sound, and the documentation thorough. In the conclusion of his statement, Mr. Hanley quotes certain remarks made by the superintendent of Insurance of the State of New York which are pertinent to the present inquiry: "Unless the State is going to run Blue Cross (and Blue Shield)—and I assure you that for this purpose a far more elaborate apparatus would be required than now exists in any State agency—management of the Blue Cross Plans must retain freedom to manage their operations. . . . The law lays upon the superintendent of Insurance the responsibility of approving applications for Blue Cross subscriber rate increases unless the rates are excessive or unfairly discriminatory. . . . These legal requirements, or even assuming the law were amended so as to change the aforesaid criteria, the denial of needed rate relief to a Blue Cross Plan would be an irresponsible pretense of 'protecting' the public." The truth of these words is self-evident. It is too bad that they are so often obscured by a political smokescreen.

FIRST SESQUICENTENNIAL EVENT MAJOR SUCCESS

THE FIRST of the community programs sponsored by the Rhode Island Medical Society in celebration of its 150 years of service was by all standards a major success. On September 10, at Providence College, approximately 125 athletic coaches and trainers representing all the major secondary public and private schools in the state were treated to an outstanding educational program on the prevention and the treatment of athletic injuries, the entire Conference carried out under the sponsorship of our Society.

In spite of the fact that the day was one of the hottest September days on record, the audience remained in continuous attendance from early afternoon until well into the evening hours as physicians from our Society joined outstanding therapists (including the head trainer of our Olympic teams at Melbourne and at Rome) to learn effective ways to eliminate injuries to boys engaging in competitive athletics at the high school level.

Marking as it did the first complete presentation of the problem of injury prevention to the high school athletic personnel of the state, the Conference was of tremendous value to every school, and thereby every community. The leadership of the state medical society, and of the committee on the prevention and the treatment of athletic injuries, warrants highest commendation from every physician. The success of this Conference augurs well for the future events which will climax with the *Exposition of Health Progress* next April to which the entire citizenry of Rhode Island is to be invited, and our 151st annual meeting to be held at the Brown University gymnasium.

Prompt attention to the special assessment made this month by the Society on every member to defray the costs of the Sesquicentennial celebration will be the best evidence of the support of the entire medical profession of the public service programs the Society is undertaking in recognition of its 150th year of operation.

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safe and effective for patients of all ages suffering from upper respiratory tract congestion

DOSAGE

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Adults and older children	1	2	three times daily
Children 4 months to 6 years of age	½	1	
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TEAMWORK IN THE MANAGEMENT OF CHRONICALLY ILL HOUSEWIVES

GEORGE F. MOORE, JR.

The Author, *George F. Moore, Jr., of Smithfield, Rhode Island. Chief, Rhode Island Division of Vocational Rehabilitation.*

NEW METHODS AND SERVICES to help chronically ill and disabled wives and mothers to resume their homemaking and child care responsibilities are being provided through joint collaboration of Newport Hospital, the State Division of Vocational Rehabilitation, and the University of Rhode Island Extension service. The program, which was initiated this spring, is a team effort to identify adjustment problems in the homes of women patients that may be worked upon through the pooled efforts of several professional groups and while the patients are still in the hospital. These professions include a physician, social worker, nurse, physical therapist, home economist, and a specially trained vocational rehabilitation counselor.

As examples of the program's operation the rehabilitation team may provide a plan by which a mother who has suffered a stroke and has lost considerable use of one arm can bathe her infant, hang clothes out to dry, or prepare a meal. It may make it possible for a mother confined to a wheelchair to lift her baby from the crib and dress him.

Patients are referred to the program by their physicians and are given a thorough evaluation of their total needs by the team. This includes medical appraisal and prescription of treatment and therapy programs, nursing services, social work (when there are family problems which interfere with the adjustment of women patients to their homemaking duties), and a co-ordinated approach on the part of the home economist and the vocational rehabilitation counselor in planning and applying work simplification methods to aid in the patients' readjustment.

A facet of the vocational rehabilitation counselor's role is to act in part as a teacher with the other team members and particularly the home economist. The rehabilitation counselor works with the patient towards the elimination or modification of work routines in the home which present particular difficulties to the handicapped homemaker. The counselor suggests adaptation of home equipment to save energy and time and also assists in identifying jobs in the homemaking situation which can be assumed by other members of the family.

The following case histories serve to illustrate the problems of disabled wives and mothers and the methods employed in the Newport program which ease patients into their homemaking situations.

A forty-four-year-old mother of three school-aged children, who had suffered a cerebral thrombosis in January of this year, upon admission was diagnosed as having arteriosclerotic heart disease with fibrillation and tachycardia, with some disablement as a result of right hemiplegia. During the patient's hospitalization, intensive physical therapy was provided and considerable functional improvement of both arm and leg was accomplished.

Following this the hospital team determined that the woman could return to her household duties provided that her three children assume the greater share of responsibility toward themselves and their home. The plan to accomplish this was worked out through numerous contacts by the vocational rehabilitation counselor with the children.

As part of the general home management planning, an adjustable ironing board and chair were purchased by the Vocational Rehabilitation Division along with an electric broom suitable for the client's small stature and limited strength. Instruction in the use of this equipment was given and following the patient's discharge, it was determined that she was able to cope with her homemaking responsibilities without overtaxing her strength and with minimal risk of future debilitation and hospital readmission.

A second mother, who had been crippled by poliomyelitis as a child, and who had suffered from generalized rheumatoid arthritis for the past ten years, received a similar total evaluation of her condition. She was provided physical therapy to improve motion in joints and the Division of Vocational Rehabilitation purchased several items of household equipment, including grab bars and an adjustable ironing board. She then was able to return to her home with a greater potential for her homemaking duties and the care of her four young children.

In addition this woman, who had briefly attended art school prior to her marriage, is being furnished by the Division of Vocational Rehabilitation a course in arts and crafts with the hope that these

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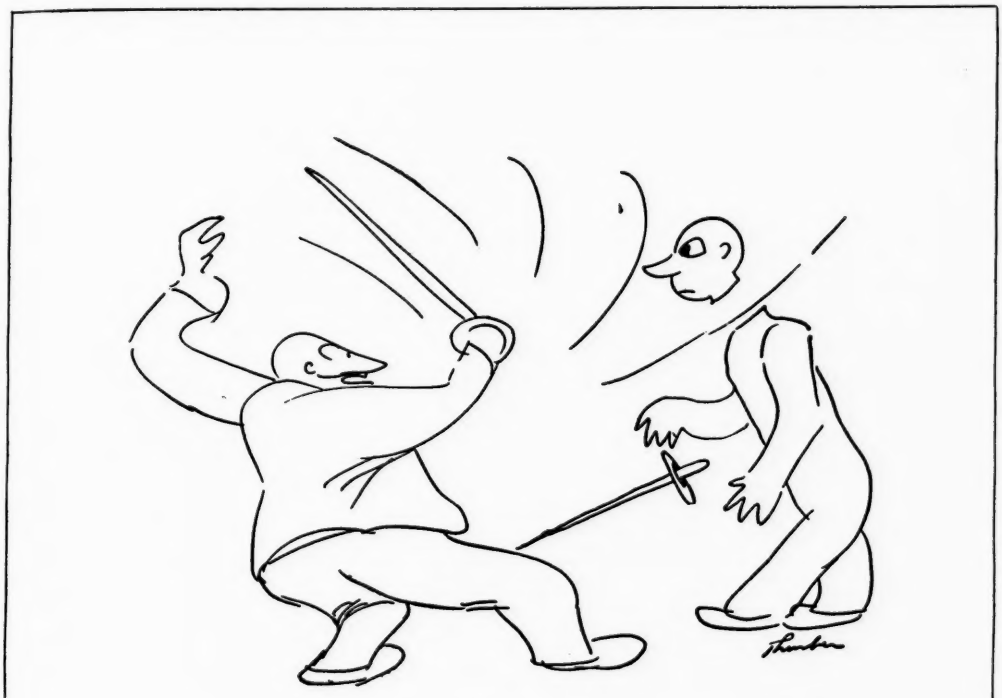

"Touché!"

TEAMWORK IN THE MANAGEMENT OF CHRONICALLY ILL HOUSEWIVES

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activities will enable her to supplement the marginal family income through the sale of articles she designs and creates.

Another woman, a sixty-five-year-old widow whose physician diagnosed her condition as osteochondritis, generalized, with marked destruction of the left knee, was admitted to Newport Hospital following an arthrotomy and removal of semilunar cartilages and osteophytes from the knee. A patelloplasty had also been done. Postoperative care called for a rehabilitation program of physical therapy with massage and quadriceps exercises. Because the patient was without Blue Cross and Physicians Service coverage, the Division of Vocational Rehabilitation underwrote the full cost of her hospital care program. Special shoes with sole and heel lifts were purchased by the Vocational Rehabilitation Division. The client's posture improved, and walking and standing problems were lessened.

In concert with the home economist the rehabilitation counselor planned rearrangement of the patient's kitchen. A refrigerator, kept in the hallway, was moved into the kitchen for better accessibility. A rail at the top of the stairs leading into the woman's apartment was constructed. In addition, and with assistance of students of the Rogers High School woodworking class, needed shelves and counter space and racks for cupboard doors were installed. Arrangements were made to have a telephone pole, that was to be removed by the Newport Electric Company, set up in the patient's yard so that it could serve as an upstairs clothesline. This eliminated the hazard and strain of negotiating a difficult flight of stairs into a yard that was often damp.

Not all of the women patients who have been treated in the special Newport rehabilitation program are as successfully restored to their homemaking functions. Problems of motivation, long-term debilitation, and the multiple handicaps which so often burden chronic disease patients sometimes interfere with the dedicated efforts of the team to restore them to independent and productive living. Results so far, however, indicate that a majority of homemakers can be substantially helped by the program. When it is considered that the average disabled homemaker is usually more isolated from the world outside than the male rehabilitation client, less likely to receive the help of the various health and social agencies in the community, and frequently faces overwhelming frustration in meeting the daily demands of a job she is not able to handle, the results of the new rehabilitation program so far constitute a giant step forward in community planning and organization to meet her needs.

CLICHÉS OF SOCIALISM

"I'm a middle-of-the-roader."

ARISTOTLE, some twenty-three centuries ago, developed the idea of the middle way or, as he thought of it, "the golden mean." He used the term to describe certain virtues which consist of an intelligent moderation between the extremes of two opposite vices.

One concludes from his reflections that *courage* lies midway between cowardice and rashness; *liberality* between stinginess and extravagance; *ambition* between sloth and greed; *modesty* between the Milquetoast type of humility and the strutting dictator's kind of pride; *frankness* between secrecy and loquacity; *friendship* between quarrelsomeness and flattery; *good humor* between moroseness and buffoonery; *self-control* between indecisiveness and impulsiveness.

A century or so later the idea was given a perverse twist in *Ecclesiastes*—descending perilously close to the modern view.

> *"In my vain life I have seen everything; there is a righteous man who perishes in his righteousness, and there is a wicked man who prolongs life in his evil-doing. Be not righteous overmuch, and do not make yourself overwise; why should you destroy yourself? Be not wicked overmuch, neither be a fool; why should you die before your time?"*

In the twelfth century the eminent rabbi, Maimonides — again on the high road — was counseling his followers to choose the golden mean. His middle way, like Aristotle's, was that ideal route which leads between two extremes of opposite vices.

In our day, "middle-of-the-road" is more an excuse for intellectual sloppiness than a guide to moral discipline. There is nothing golden about it and it does not qualify as a mean. For instance, there is no middle way, as George Schwartz put it, between monogamy and polygamy. Nor is there any golden mean that can be derived from subdividing a single vice. Halfway between the theft of a small amount and the theft of a large amount is robbery all the way, no matter how you slice it!

In the jargon of our times, "I'm a middle-of-the-roader," has only political connotations. It means, when the drift is socialistic, that its advocates waver midway between a modicum of socialism and whatever extreme of socialism happens to be in popular favor. Thus, the middle-of-the-roader always finds himself wherever the currents of opinion dictate; he has no other basis for judging where his stand should be. The more extreme the socialistic view, the deeper will he be engulfed in socialism.

Quite obviously, there is no virtue in being a political middle-of-the-roader. This position sounds something like the golden mean, but there the resemblance ends. What we have is a confusion of sound with sense. The former is not even a reasonable facsimile of the latter. Middle-of-the-roadism is but a platitudinous position riding inexcusably on the reputation of a splendid philosophical conviction.

LEONARD E. READ

... From the Foundation for Economic Education, Inc.
Clichés of Socialism, Number 17

One day recently the gas-meter-reader came into the Medical Library on his regularly appointed rounds. After reading the meter and recording the appropriate statistics, he inquired of our estimable librarian, Mrs. Helen DeJong, whether she had a copy of *Manual of Homeopathic Practice* published by one Alvan Edmond Small in 1866. Upon delving into the files, Mrs. DeJong informed our Gas Company visitor that the Library had only the 10th edition published in 1864 whereupon the meter reader replied that this would not do and went on his way.

MEDICINE IN THE ORIENT

OBSERVATIONS BY LAURENCE A. SENSEMAN, M.D. of Lincoln, Rhode Island

SUMMER SESSIONS or institutes for scientific study for the prevention of alcoholism are now being held in various leading cities of the world. They are sponsored by National Committees for the Prevention of Alcoholism in the various countries, including the United States. It has been my privilege in the past five years to lecture about our Rhode Island state program of the Division of Alcohol at the American University in Washington, D.C., the Loma Linda University in Los Angeles, California, and the University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

This past April, I was invited to lecture on this subject in the Philippines by the chairman of the National Committee for the Prevention of Alcoholism for the Philippines, General Basilio Valdes. Doctor Valdes was formerly surgeon-general of the Philippine Islands and former chief of staff under General Douglas MacArthur during World War II. I substituted for Doctor Andrew C. Ivy of the University of Illinois and gave six basic lectures on alcoholism.

Manila is only twenty-two hours by jet from Boston with stops at Los Angeles, Honolulu, and Guam.

I received a cordial welcome in the Philippines and lectured to a class of about 80 students which included doctors, psychiatrists, teachers, law enforcement agents, ministers, social service workers, and others interested in the problem of alcoholism.

My lectures were: (1) Philosophical and Educational Background on the Prevention of Alcoholism, (2) Etiology of Alcoholism, (3) Physiology and Pharmacology of Alcohol, (4) Definition of Terms of the Problems Created by the Consumption of Alcoholic Beverages, (5) Alcohol and Human Tissues, and (6) Rhode Island Division of Alcohol.

I visited the only public mental hospital in the Philippines, the National Mental Hospital in Manila. This large institution has a bed capacity for 2,000. The census the day I was there was over

6,200 patients! The best building on the extensive grounds would compare to a third rate U.S. Mental Hospital. The largest part of the hospital was unbelievably primitive. Beds were narrow wooden benches, and many slept out of doors on the ground on mats. Food was served on tin plates without any eating utensils. I was shown about this hospital by Doctor Rodriques, medical superintendent, who told me the future plan is for building several smaller mental hospitals in various places about the Philippines. No further large mental hospitals are planned.

Their method of treatment in the better part of the hospital is similar to any other mental hospital, but they are limited in equipment and the newer pharmaceuticals. Psychotherapy seemed nonexistent due to lack of trained personnel. The largest part of this hospital provided only primitive custodial care. Much professional help is needed to raise the standard of treatment and care in this hospital. Public apathy and lack of sufficient funds are deterrents to any degree of progress.

Doctor Gumersinds Garcia, director of Mental Health in the Philippine Islands, was most cordial. He is vice-chairman of the National Committee for the Prevention of Alcoholism. I visited him in the Mental Health Headquarters in Quezon City. They have a number of clinics in and about Manila and have plans for future g. owth in the Philippine Islands. The Mary Johnson Hospital (Methodist) of which Doctor Garcia is the medical director is a modern, up-to-date general hospital. The Manila Sanitarium and hospital (Seventh-day Adventist), a 142-bed institution, is conducting an energetic program of training for interns and residents. Both of these hospitals are operated by religious denominations from the United States.

Doctor Garcia and I met with the president of the University of the Philippines in his office on the large campus. It was a pleasant occasion and enjoyable, as the Filipinos appreciate the generosity the United States has extended toward them and visitors are made to feel important and welcome.

A visit to Corregidor was arranged by General Valdes and a Philippine gunboat took us to this historic spot, 26 miles from Manila in Manila Bay. A Marine bus and guide took our party to places of interest on the island, a never to be forgotten experience. The island is no longer a fortress, but a bleak jungle, which covers the evidence of the terrific struggle that took place here.

From Manila to Hong Kong is only a few hours by Viscount turbo-prop plane. This beautiful city is

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full of contrasts that interest visitors. The Occident and Orient are blended into a melting pot of poverty and riches. This too is the window of Red China, so menacing in the distant horizon of mountains.

I spent three memorable days in Hong Kong, then on to Taipeh, Formosa, or Taiwan. I visited a private psychiatric hospital, Huh Chiang Mental Hospital, with Doctor Bernard Shao-liau Lui. While this was a small institution I felt it was doing a good work and representative of the area. One of the staff had trained in Philadelphia. Modern concepts of psychiatry were being utilized. This institution seemed well conducted, the patients seemingly receiving adequate care. The psychiatric staff also taught psychiatry and had an active service in the Taiwan Sanitarium and Hospital, a modern five-year-old hospital with 120 beds operated by a religious group (Seventh-day Adventist) from the United States. A personal friend was in charge of the medical service. They admitted 2,750 patients in 1960 with more than 43,000 out-patient visits.

The Island population seems to be marking time, impatient to get back to the mainland of China. Soldiers seem to be everywhere with slogans exhorting greater effort to hasten their return to China. From the air this verdant island shows evidence of battle readiness.

Tokyo, by Electra Jet, was a four- and one-half hour trip. This huge city seems western and modern but still the signs betray its oriental flavor. From the huge Tokyo tower, similar in construction to the Eiffel Tower in Paris, one gets a wonderful view of this sprawling city and Mount Fuji in the distance.

A trip on the electric trains is not hard if you know just where you are going and if you can find some one who can speak English! The trains are very prompt, and the crowds at Tokyo Central Station seem like those of Times Square in New York. Sight-seeing plus one talk to the student body of the Japan Union College filled my three and one-half days in Japan.

Nikko, a Shinto Shrine of the emperor, is a tourist attraction and a photographer's paradise. To the psychiatrist the three monkeys—see no evil, hear no evil, speak no evil—made famous by this shrine are particularly significant.

Exciting, indeed, is the return trip. The Pan American Jet flight No. 2 to Honolulu left at 12:00 midnight, Saturday. Doctor Maurice Silver, formerly of Providence, met our plane at the airport. He is at present with the large Kaiser Hospital on the Island of Oahu. The continuing flight after the two-hour stopover landed in Los Angeles at 9:30 P.M. Saturday night, two- and one-half hours before it left Tokyo thanks to the international date line and a loss of one day by flying east.

THROUGH . . .  *the Microscope*

"Flu" Cycle Threat Cause for Vaccination Program

Doctor Joseph E. Cannon, state health director, has made an urgent plea for persons in the "special risk groups" to be vaccinated against influenza. The *special risk groups* are:

1. Persons with heart disease, lung disease, diabetes, and other chronic illnesses.
2. Persons over 65.
3. Pregnant women.

According to a statement issued by Doctor Luther L. Terry, surgeon general of the Public Health Service, an upswing in the influenza cycle is likely to hit this country during the fall and winter. Doctor Cannon said that in the past we have seen cases of paralytic polio which, in all probability, could have been prevented by adequate vaccination. Similarly, whenever we have had outbreaks of influenza, some of the deaths, we know, could have been prevented if the persons had been vaccinated.

Doctor Raymond F. McAteer, assistant director, local health services, is of the opinion that Rhode Island, like the rest of the country, will show an increase in the number of cases of influenza. He joins Doctor Cannon in urging the vaccination of the *special risk groups* beginning immediately, so that these people will be protected during the late fall and early winter months. For those persons who have never been vaccinated against influenza, they should get one shot now, followed by a second two months later. Those who have had the flu vaccine in the past should get a booster shot now.

Foreign Medical Graduates Increase in 1960-61

The number of foreign medical graduates in approved training programs increased by five per cent during 1960-61, the American Medical Association reported recently.

A temporary decrease had been expected due to the program initiated by the Educational Council for Foreign Medical Graduates (ECFMG) requiring that foreign interns and residents be tested to determine whether their education measured up to American standards, the highest in the world.

However, the annual report of the A.M.A. Council on Medical Education and Hospitals revealed that of 37,562 internships and residencies filled during 1960-61, there were 9,935 foreign medical graduates constituting 26 per cent of the total. In 1959-60, there were 37,784 filled internships and residencies, of which 9,457, or 25 per cent, were foreign graduates.

While the number of foreign residents increased by 1,270 in 1960-61, the number of foreign interns decreased by 792 compared with the previous year.

This is the first year since 1954-55 that foreign interns have comprised less than one third of all the foreign physicians in training and is undoubtedly attributable to the ECFMG certification program, the A.M.A. Council said.

"That this decrease is likely to be only temporary is suggested by the results of the April 4, 1961, Educational Council for Foreign Medical Graduates examination which showed that 1,673 candidates were certified directly from abroad," the report said. "If the same or a greater number is certified abroad as a result of the October, 1961, examination, then the previous numbers coming annually to this country for initial training as interns will be equaled or exceeded."

Although foreign physicians were in training in 46 states, the District of Columbia, Puerto Rico and the Canal Zone, nine states accounted for 72 per cent of the total. These were New York with 2,360 or 24 per cent, Ohio with 893 or 9 per cent, Massachusetts with 711 or 7 per cent, Illinois with 704 or 7 per cent, Pennsylvania with 684 or 7 per cent, Michigan with 499 or 5 per cent, New Jersey with 465 or 5 per cent, Maryland with 450 or 4 per cent, and Missouri with 402 or 4 per cent.

The largest single group of foreign physicians was 2,303 from the Philippine Islands.

As to the future, the report said:

"While it is fair to estimate that increasing numbers of properly qualified foreign trained physicians will be coming to this country annually, it is probable that the total on duty may decrease as the

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federal government branches responsible for administering the U.S. Information and Educational Exchange Act of 1948 implement the law more effectively regarding return of exchange students to their native lands upon completion of training. The present policy limits such training of physicians to five years."

The Council also reported on two recently inaugurated programs which are expected to shape the future pattern of both medical practice and the health care of the American public.

The first step was the formation of the Advisory Committee on Internships and Hospital Services. This group will "consider methods of producing a more appropriate balance between the number of approved internships and the number of available candidates." In addition, it will consider and make recommendations for "methods of providing competent professional assistance to hospital staffs other than by interns or residents." The committee's final report is due by June, 1962.

The second step is the formation of an Advisory Committee on Graduate Medical Education and Training to study the entire present-day pattern of graduate medical education, i.e., the internship and residency phase of a physician's training lasting from one to seven years.

The committee will make recommendations concerning the conduct of such training in the future in relation to the needs of the nation for physicians, the needs of the public for medical care, and developing patterns of medical practice.

National Poison Prevention Week Designated

Secretary Abraham Ribicoff has expressed the concurrence of the Department of Health, Education and Welfare "in the designation of the week of March 18, 1962, as National Poison Prevention Week." In a letter to Congressman Emanuel Celler, chairman of the House Judiciary Committee, Secretary Ribicoff noted that there were some 822,000 accidental ingestions of medicines, household products, cosmetics, poisonous plants and other nonedible materials, over 300,000 by children under five years of age. "Almost all of these could have been prevented. We believe that the designation of a National Poison Prevention Week with the concentration of attention from the press, radio, television and other media will bring some of these precautions to the attention of the public and will result in an appreciable reduction of accidental poisonings," explained the H.E.W. Secretary.

Increase in Hospital Expenditures

Americans are spending an increasing portion of their income on health services and this trend will continue, according to George Bugbee, president of the Health Information Foundation.

Writing in the September 1 issue of HOSPITALS,

Journal of the American Hospital Association, Mr. Bugbee reported that the annual expenditures for all types of medical care have risen from 3 billion dollars 30 years ago to 25 billion dollars today. During this period, he said, private expenditures for hospital care have risen from 400 million dollars to 5.5 billion dollars, representing approximately 30 cents of each dollar spent for medical care today.

He explained that the increase in hospital expenditures is in part due to an increase in the unit cost of a day of care, which has risen 340 per cent since 1940. "The unit cost of a day of care and the insurance coverage for hospitalization which reflect the increase are the fastest rising items in the medical price index," he said.

Future expenditures for medical care will inevitably be greatly affected by our expanding population which is expected to reach 235 million by 1975, Mr. Bugbee said, adding that the growing number of people over age 65 account for approximately nine per cent of the population.

The upward trend of chronic illness in later life will mean even greater expenditures for medical care, Mr. Bugbee asserted. A recent survey sponsored by the Health Information Foundation showed that 43 per cent of all families reported at least one member seeing a physician for a chronic condition; but this figure jumped to 69 per cent among families with medical expenditures of 1000 dollars or more in a given year.

Mr. Bugbee predicted a continued trend toward greater utilization of hospital facilities. He observed, "During my generation, the care of obstetrical patients has moved from home to hospital, and there is also a movement from home to hospital for the last days of life. Deaths in general hospitals have increased in the last 20 years from 34 to 48 per cent of all deaths."

Professional Schools Gain Broader Financial Support

A new program to provide a broader form of financial support to schools of medicine, dentistry, osteopathy, and public health has been announced by Doctor Luther L. Terry, surgeon general of the Public Health Service.

"The prime purpose of this program is to increase the capacity of the nation's research and educational institutions for carrying out their health-related research and research training," Doctor Terry said. "We believe it will meet the needs of these institutions for greater flexibility in the use of portions of the federal support funds they have been receiving."

Purpose of the grants is to provide general support on a continuing basis for research and research training activities. A distinguishing feature of the grants is the greater freedom the recipient institutions will have in determining the specific use of the

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funds, as compared with other types of Public Health Service grants.

Doctor Terry said that funds for the support of research and research training projects by the National Institutes of Health have risen from a level of 3.5 million dollars in fiscal year 1947 to more than 400 million dollars in fiscal year 1961. For the most part these funds have been used for specific projects proposed by individual investigators.

"To some extent," he said, "this procedure has limited the autonomy of grantee institutions and investigators in controlling the character and direction of their health-related research and research-training activities.

"The new form of support will afford more freedom and enable the institutions to assume greater responsibility in carrying out their programs."

Legislation for the program is contained in Public Law 86-798, passed in September 1960.

Radioactive Fall-out from Russian Tests Noted

Evidence that radioactive fall-out from the Russian resumption of nuclear weapons testing is falling on the United States has been announced by Secretary Abraham Ribicoff of Health, Education, and Welfare.

The Public Health Service Arctic Health Research Center at Anchorage, Alaska, reported that preliminary analysis of air samples taken Tuesday, September 5, showed a radiation level of 7 micromicrocuries per cubic meter of air, 35 times the average daily levels of .2 micromicrocuries during August, said Secretary Ribicoff.

Doctor Luther L. Terry, surgeon general of the Public Health Service, said that no immediate health danger exists in the increased fall-out. He also said that, while he has no question of the fact that the sample shows fall-out from Russian weapons testing, as a matter of scientific practice the analysis will be rechecked.

"During the past three years, in the absence of atomic bomb testing in the atmosphere, the level of radioactive fall-out has gradually fallen," said Secretary Ribicoff. "But if these atmospheric tests are continued by the Soviet Union, the world faces again the threat of contamination of food, water and air."

Doctor Terry pointed out that the 7 micromicrocurie level reflected in the reading from the Alaskan test station is well below human tolerance levels and considerably lower than levels reported from Alaska on numerous occasions prior to the test moratorium in the fall of 1958.

The surgeon general also said that the Public Health Service has tightened all of its radiation

surveillance, but a complete picture of the effect of the Russian testing will not be done for several months.

The 45 radiation stations that sample air and rain or snow (first indicators of fall-out) have been put on around-the-clock monitoring duty and asked to report within three hours any sample that shows a tenfold increase above average radiation levels. In ordinary practice, air and rain is monitored on an 8-hour, 5-day-a-week basis.

Thyroid Association Offers Prize for Essay on Goiter

The American Thyroid Association, Inc., again offers the Van Meter Prize Award of 500 dollars to the essayist submitting the best manuscript of original and unpublished work concerning *Goiter — especially its basic cause*. The studies so submitted may relate to any aspect of the thyroid gland in all of its functions in health and disease. The award will be made at the Annual Meeting of the Association at the Roosevelt Hotel, New Orleans, Louisiana, May 9-12, 1962.

The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length and must be presented in English. Duplicate, typewritten copies, double-spaced, should be sent to the secretary: THEODORE WINSHIP, M.D., 430 N. Michigan Ave., Chicago 11, Illinois, *not later than January 1, 1962*. The committee who will review the manuscripts is composed of men well qualified to judge the merits of the competing essays.

DID YOU KNOW?

- **That a survey by the American Dental Association has shown that the average dentist in private practice has a 43-hour work week, but that three out of every eight dentists work more than a 45-hour week.**
- **That the 43 hours are divided among 34 hours at the dental chair, four hours doing laboratory work, two hours doing other office work, and three hours in free office time.**
- **That the average dentist takes a three-week vacation each year, but vacations vary by age, ranging from one-and-a-half weeks for dentists under 30, to more than five weeks for dentists over 70 years of age.**
- **That the average dentist has 1,184 patients who visit his office 3,130 times a year.**
- **That one out of every eight dental patients has a tooth extracted, and two out of 11 have X-rays.**

Patronize Journal Advertisers

BOOK REVIEWS

CEREBRAL PALSY AND RELATED DISORDERS. A Developmental Approach to Dysfunction by Eric Denhoff, M.D. and Isabel Robinault, PH.D. McGraw-Hill Book Company, Inc., N.Y., 1960. $12.00

CEREBRAL PALSY AND RELATED DISORDERS is a book devoted to a subject as yet ill-defined. The authors begin their presentation in the opening chapter with a discussion of the nature of cerebral palsy and then, in a "newly developing concept," loosely categorize cerebral palsy and related disturbances under the broader term of *Syndromes of cerebral dysfunction.*

In order to have a clear idea of cerebral palsy, it is important to have a clear idea of the handicapped in general. These can be said to be of four types. First, motion or the motor handicapped including all forms of crippled children. A second group is made up of the sensory handicaps involving the special organs such as sight, hearing and sensation. The third group may have perfect ability to take in and gain information and knowledge as well as perfect ability to express this knowledge by motor response, but is unable to use the knowledge gained because of defects of the mind. This is the mentally handicapped. Finally, there is a large diffuse group of functional and organic handicaps including such disturbances as heart disease, lung disease, and the like. The causes of all these handicaps may be congenital or defective development, injury at or around the time of birth, or they may result from acquired postnatal injury or disease of many types.

Subsequent chapters review clinical descriptions of these syndromes, note trends in treatment in clinics and schools across the country specializing with these dysfunctions, and make an effort to clarify these syndromes with illustrative cases. Although orthopedists in the past have been especially concerned with cerebral palsy their general dissatisfaction with the problem and with the results obtained may be due to the fact that cerebral palsy is not strictly a motor handicap, but involves other fields of the handicapped. Slowly the team approach has evolved as a truly comprehensive developmental assessment to the patient's physical, mental, emotional and social needs from birth to maturity. The Meeting Street School in Providence, Rhode Island is used as the prototype of a clinic for young children run along these comprehensive lines. A neurologist would help to strengthen this team's comprehensive program and a chapter on the neurological examination in the newborn in the next edition will round out this well-written book.

The aims of treatment may vary widely, and the decision must be made both from the economic and individual viewpoint. Rehabilitation for some life work is the first consideration. When this is impossible then freeing the individual from the care of another becomes the goal. Diagnosis and treatment, the authors state, are dynamic and optimistic. Look for the hidden handicap, have a high index of suspicion and change the therapy as developmental maturity demands. With this in mind and with the elemental nature of our present knowledge of cerebral processes most literature concerned with these dysfunctions is valuable. CEREBRAL PALSY AND RELATED DISORDERS is no exception.

PETER L. MATHIEU, JR., M.D.

HANDBOOK OF PEDIATRICS by Henry K. Silver, M.D.; C. Henry Kempe, M.D. and Henry B. Bruyn, M.D. 4th ed. Lange Medical Publications, Los Altos, Calif., 1961. $3.50

The fourth edition of the HANDBOOK OF PEDIATRICS presents an easily available summary of diagnosis and treatment of diseases of children. It is of a convenient size which can be carried in the practicing physician's bag or the house officer's pocket. The handbook contains a concise summary of these diseases, which is intended to "supplement rather than to replace the more complete pediatric texts and reference works."

As a handbook I think it is excellent. I was particularly pleased with the chapters on emotional problems and adolescence. They are easy to read, and the problems are described in a brief, concise fashion. The handbook is particularly recommended to house officers.

ROBERT M. LORD, JR., M.D.

MAYO CLINIC DIET MANUAL by the Committee on Dietetics of the Mayo Clinic. 3rd ed. W. B. Saunders Co., Phil., 1961. $5.50

This is a very comprehensive manual, outlining many diets. The approximate composition of each

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NEW...made from 100% corn oil UNSALTED MARGARINE FOR HYPERTENSIVE PATIENTS

* contains only 10 mgs. of sodium per 100 grams
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Fleischmann's Unsalted Margarine is made from 100% corn oil and contains both liquid corn oil and partially hydrogenated corn oil. Its linoleic acid content of 30% is three times higher than the 10% of regular margarines and ten times higher than the 3% of butter. This is the *only* unsalted margarine made from 100% corn oil.

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If your hypertensive patient needs sodium restriction, recommend Fleischmann's Unsalted. It has a light, delicate taste that he'll like. Tell him that it is available in his grocer's frozen food case.

Write now for physician booklet of 5 coupons—each coupon redeemable by your patient for 1 lb. of Fleischmann's Unsalted Margarine. Address Fleischmann's Unsalted Margarine, 625 Madison Avenue, N. Y. 22, N. Y. *Distribution presently limited in some areas.*

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Polyunsaturates	30%
Monounsaturates	50%
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AVERAGE DAILY INTAKE
Two Ounces or Eight Pats of Fleischmann's Corn Oil Margarine Will Supply

Corn Oil—Liquid	22.7 Gm.
Corn Oil—Partially Hydrogenated	22.7 Gm.
Iodine Value	90-95
Sodium (dietetically sodium-free)	6 Mgs.
Linoleic Acid	13.6 Gm.
Vitamin A (Adult's Need)	47%
Vitamin A (Child's Need)	62%
Vitamin D (Adult's and Child's Need)	62%

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Fresh-Frozen in the green foil package in your grocer's frozen food case

ONLY UNSALTED MARGARINE MADE FROM 100% CORN OIL

BOOK REVIEWS

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diet is analyzed in terms of adequacy of specific nutrients and recommendations for supplementation are made where necessary to meet the standards set by the National Research Council. Each diet is arranged to show the foods included, the foods excluded, the dietary pattern and a sample menu with weight in grams and household measure of each menu item.

Some of the dietary programs in this manual are controversial. Among them are calculation of diabetic diets by the gram method, high calcium content of the Standard Tube Feeding, presentation of The Ketogenic Diet for the epileptic child, and a relatively high fat allowance for gallbladder disorders.

Although this manual would have a limited use in the small hospital, its analyses and descriptions of diets and its directions for computation are excellent.

LOUISE S. JENKS
ADA Dietitian
Jane Brown Unit
Rhode Island Hospital

ATTI DEL III. CONVEGNO DELLA MARCA PER LA STORIA DELLA MEDICINA. Mario Santoro, editor. (Transactions of the 3rd meeting for the history of medicine) Sotto la Presidenza Onoraria di Adalberto Pazzini. Presidente del Comitato Promotore Mario Santoro. Fermo – Sede dell' Antica Universitá 24-25-26 Aprile 1959. La Rapida, Fermo, 1960. (In Italian)

Fermo is a town of about 15,000, on a hill, in central Italy, a few miles from the Adriatic coast. Its center of study, founded around 1000, is especially devoted to the history of medicine and pharmacology.

This de luxe edition of 250 copies is a fine example of printing and binding. The first volume of transactions appeared in 1955, the second in 1957. At the end of the book are listed the titles of the papers of the 1955 and 1957 editions.

Medical history is flourishing in Italy, particularly from the chairs of Rome (Pazzini), Bologna (Busacchi and Nardi), Ferrara (Münster), Perugia (Stroppiana).

Under the editorship of Mario Santoro, dean of the University of Fermo, the student of medical history will enjoy 44 tracts and among them studies on Leonardo, Garzoni, Rainaldi, Bacci, Dolens, Jasolini, Fioravanti, Angenio, on ancient hospitals, famous consultations, anatomical museums, early medical schools, on hydrotherapy in the Renaissance, anatomy, blood circulation, lithotomists and bonesetters, the slave market in Venice, and the court litigations when a diseased slave was sold as in perfect health.

Numerous plates illustrate manuscripts, title pages, anatomical drawings, medicinal plants, and old hospitals.

F. RONCHESE, M.D.

REVIEW OF MEDICAL MICROBIOLOGY by Ernest Jawetz, M.D.; Joseph L. Melnick, PH.D. and Edward A. Adelberg, PH.D. 4th ed. Lange Medical Publications, Los Altos, Calif., 1960. $5.00

The fourth edition of REVIEW OF MEDICAL MICROBIOLOGY brings up-to-date information especially in the fields of virology and the use of antimicrobic drugs where concepts are changing continually with the accumulation of research data. The review stresses basic science information in the different groups of subject matter dealt with including bacteriology, mycology, virology, chemotherapy, and virology, and in this regard provides material especially useful to medical technology students and to physicians who are preparing for board examinations in the basic sciences. There is much useful information also for the medical student, the house officer and the practicing physician. Some points of criticism are evident. The illustrations are few and scattered, and with the exception of a few electron micrographs most of the other illustrations appear to be sketches or drawings rather than photographs of clinical material. There is no section of medical parasitology, which usually is included in the general subject of medical microbiology. Aside from a list of general reference books and journals at the end of the index, there are no references relating information in the text to the research literature. However, these deficiencies may relate to the edition being designed as a review and not a textbook and contribute to the low cost of the review. In spite of the shortcomings, the book should be very useful to the students and physicians for whom it is intended.

RAYMOND M. YOUNG, PH.D.

Sesquicentennial Celebration Dates

SCIENTIFIC MEETING

May 8 and 9, 1962

Marvel Gymnasium, Brown University
